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ORIGINAL LECTURES.

ON DISEASE OF THE KNEE-JOINT.

A Clinical Lecture
Delivered at the Bellevue Hospital Medical College, New York.

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(Reported by Edward Develin, M.D.)

GENTLEMEN: This morning I desire to call your attention to disease of the knee-joint. There are, in all, fourteen ligaments connected with this joint—your Professor of Anatomy having doubtless demonstrated the same to you. The bony structures assisting in the formation of the joint are the femur, tibia, and fibula, together with the patella—the whole being lined by a synovial membrane.

We shall first take up synovitis. This can be caused by constitutional affections alone, as gonorrhœa, rheumatism, etc.; or it may be induced locally by a blow, wrench, or cold. If it is acute, and the joint filled with fluid, and the patella elevated, giving fluctuation, by percussion you can get a click of this bone upon the femur, as a rule. If, however, the effusion is not very great, you will fail to get this click; but you will be enabled to detect the peculiar fluctuating feeling upon either side of the patella. You will remember that under the patella there is a bursa, and another under the tendon of the quadriceps muscle above the patella, and yet another external to the patella. These I specially call your attention to, as they are of vast importance and significance: for you may mistake a disease of these bursæ for disease of the knee-joint itself. Between the bursæ and the knee-joint we find quite a mass of fat. It is, however, well to remember that disease of these bursæ may also involve the knee-joint.

Now, in synovitis of the knee-joint resulting from constitutional causes, if it be from rheumatism, as a matter of course you diagnosticate the case from the manner in which the pain changes from place to place. But you must also think that, perhaps, in addition to the synovitis, you may have an osteitis, this being caused by a sudden wrench, strain, or concussion; more generally the concussion will cause an extravasation of blood into the cancellous tissue lying just beneath the encrusting cartilage of the femur or tibia, or into the patella. This injury may appear but slight at the time, and cause the patient no great pain, and even if examined by a medical man may not be correctly diagnosticated. But if this apparently slight injury be not correctly diagnosticated, and the proper treatment be neglected, it will in time lead on to serious disintegration of the bone substance; a low grade of inflammation being set up, and pus formed, which slowly burrows into the joint, the encrusting cartilage becoming involved, leads on to necrosis; ulceration of the cartilage taking place because of its low grade of vitality, and soon the true bony structures come into contact, being denuded of their cartilage by the disease; there appearing at the same time a fungous exudation from the synovial membrane lining the joint, and which hence becomes rough and granular, the membrane being changed from its smooth, shining surface, and we have what is called gelatiniform degeneration of the joint.

This condition, which I have endeavored to explain to you, is simply the result of long-continued inflammatory action, and, as a rule, from some *slight* accident. If the injury caused acute inflammation at the time, it would have been noticed at once, and appropriate treatment applied. But in those slight injuries which pass unnoticed at the time, and months elapse before the real symptoms set in, this slight injury, occurring long before, is overlooked or forgotten, and the disease is pronounced then to be white swelling, there being no redness about the joint. And yet, for the reason that there is so much constitutional disturbance accompanying this swelling, the disease has been almost universally looked upon as of constitutional origin; whereas, in the great majority of cases, it is the result of a direct injury to the parts diseased; and the long-continued action, together with the slow inflammation, is what has produced this constitutional disturbance, and leads the physician into the belief that the disease is dependent upon some constitutional dyscrasia alone. There is no doubt that a constitutional dyscrasia *may* be inherited from the parents; you can also create a disease by bad hygiene, which, sooner or later, may bring about a strumous condition; and when you have reached this condition, no matter whether inherited or acquired, a very slight injury will start degenerative action very rapidly; much more rapidly than if the health of the patient were in a normal condition—as in the normal condition the system has more recuperative and resisting power than when diseased.

Now, I do not wish you to misunderstand me on this point; but I will distinctly state that in persons laboring under this strumous diathesis, whether inherited or acquired, some local effect is necessary to start the disease. In constitutional diseases, they are diseased all over; then why should the disease manifest itself at one particular point more than another? Simply because it is a traumatism that has produced this external manifestation of the disease at this point.

The tendency of this inflammatory action is to produce an effusion into the joint, which causes a certain and characteristic distortion of the joint. Thus, in disease of the knee-joint, we find the limb partially flexed at the knee, because by this flexion of the limb the capsular ligament becomes relaxed, and the joint-cavity can then contain more fluid, and thus relieve the diseased parts from pressure. The same explanation is equally applicable to disease of the hip-joint; the limb is flexed in order to distend the joint capsule and accommodate the increasing effusion. In the course of time the muscles themselves begin to contract, owing to reflex irritability, and these in turn draw the diseased

surfaces of the bone together, and thus diminish the amount of blood to the parts pressed upon, and therefore interferes with the nutrition of these parts, resulting in severe and extensive ulceration from this lack of vitality of the part. You can, then, readily understand how this pressure adds to the torture of the patient, besides inducing a more rapid disintegration of the parts pressed upon.

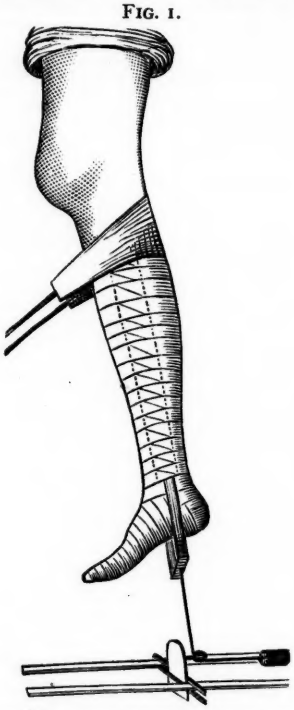
In the knee-joint, then, we have this flexion and out-rotation of the leg, the biceps muscle constantly acting upon one point only, keeps up this continued pressure upon the outer condyle of the femur. For this reason the leg is rotated outward. On the inner side of the leg we have the insertion of the sartorious, semi-tendinosus, semi-membranosus, and gracilis muscles, which act against the biceps alone on the external surface of the leg; these four muscles having different points of insertion, do not maintain their traction at one particular point; there is no continued pressure upon the articular surfaces at one point at all times; thus the inflammatory action is more tardy at the internal aspect of the joint; whereas the biceps, acting upon one point alone, allows of no relief from pressure, and thus does more damage than the other four muscles combined. This is the reason of the peculiar deformity accompanying disease of the knee-joint.

If, in connection with this diseased condition of the joint, you have constitutional disturbance—torpor of the bowels, or affection of the kidneys, etc.—it is necessary to give this condition the requisite treatment; but do not pin your faith to any so-called specifics, for there is no remedy on the face of the earth which will take the place of fresh air and good nourishing diet in this class of cases. The local treatment, however, is of the most vital importance, and if you omit that, your patient will never recover with a good and useful joint. The general treatment, independent of the local treatment, is not sufficient. You must, therefore, apply some means to overcome that distortion, by the use of traction in the required direction to correct that deformity and relieve that pressure. In these diseases of the knee-joint, you will find your patient sitting, holding his leg, until he becomes worn out by the constant effort of keeping it in one position, in order to prevent attrition of the diseased surfaces. In your treatment of this disease, if you simply lock the knee up, you will make a failure; you must have *extension* with it, or the contracted condition of the muscles will add to the progress of the disease. In contradiction of the statement I have just made, I will quote from the twentieth annual report of the New York Society for the Relief of the Ruptured and Crippled. "Weights and pulleys to extend diseased limbs are never used in this hospital, as we believe them to be mere palliatives in treatment, and often injurious."

There is no need for me to make any lengthy comment on such a statement, and the results arising from this plan of treatment in diseased joints, as the large number of cases which have been presented at our clinics for treatment, after being under treatment for months at the above hospital, have fully proved the fallacy of such a statement in relation to the proper method of treatment of diseases of the joints.

In disease of the knee-joint where the leg has become flexed, you will first require extension made in two directions, one upward and the other parallel with the long axis of the limb (see Fig. 1). If I attempt to straighten a limb in this position by parallel extension only, I simply add to the pain; but by securing the limb with extension in the *two* directions, namely, in

FIG. 1.



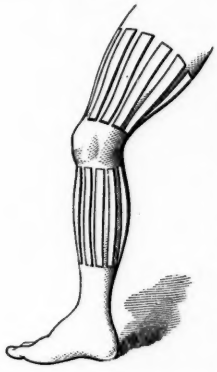
the line of the deformity, I afford instant relief. If you can place the parts in such a position as to afford relief, that is all there is for you to do; but you must carry out that plan. Sometimes it may be necessary to apply heat or cold. You may think that somewhat strange, but it is a fact; neither can I tell you which to apply, or when to apply it; you have to judge by the feelings of the patient, and apply that which affords most relief. In one case you may apply ice with great effect; if this, however, causes pain, relief may be derived from heat in all probability. Now, if there is but very little swelling in the joint, but intense pain over the coronary ligaments, then you can apply the hot iron over these ligaments and allow the wound to cicatrize; but under no circumstances get up a suppurating sore. You may, perhaps, need to apply a blister, and when the blister is raised, just let out the exudate, but do not take off the skin or you will be liable to have a suppurating sore also. After letting out the fluid, you cover the part with a piece of oiled rag. This is the only proper way to apply blisters; the actual cautery, however, you will find most efficient in these cases.

After you have, by means of your traction, brought the leg almost straight, you can then apply the knee-splint, which I here show you (see Fig. 2). In preparing the limb for the application of this instrument, cleanse it thoroughly in order to remove all particles of exudate which would prevent the adhesion of the plaster, which I now intend to show you how to apply. In the appli-

cation of any kind of splint in which adhesive plaster is used, I prefer to use Maws's or Shivers's moleskin plaster, which I here show you, and which can be procured from Messrs. Hunt & Dunlap, 1218 Broadway. In

FIG. 2.

FIG. 3.



applying this knee-extension splint, I cut inch-strips of plaster, as you now see, which are long enough to pass from just above the knee to the upper third of the thigh, and allow sufficient to reverse over the collar of the splint. I now pass more strips from just below the knee to a little above the ankle, and in like manner allow of reversing over the bottom collar of the instrument. We now have the plasters adjusted, leaving the knee exposed (see Fig. 3).[1] My assistant now holding the limb and plasters in position, I take a roller-bandage and bind very firmly around the limb, and then, with my hand, by rubbing, I firmly secure the plaster to the skin; and now, as I remove this tight bandage, you see they remain in their place without my assistant holding them, and he is at liberty to assist me in other ways.

I now take a roller-bandage, and place permanently around the leg, to retain the plasters in position; then I secure those upon the thigh in the same manner, still leaving the knee exposed, you will oberve. I am now ready to apply the splint. First, I secure the lower collar—by means of the key I regulate the size as may be required, to prevent strangulation of the circulation; then, reversing the ends of the adhesive plaster over the collar of the instrument, you notice I secure them in that position by passing a strip of adhesive plaster around the leg directly over the collar of the instrument. Having thus secured them, I now continue with my roller-bandage over the collar of the instrument and under the extension-rods around the leg, and over the reversed ends of the adhesive plaster. In this manner we have secured the lower part of the splint, and will now turn our attention to the upper part of the same. I desire specially to call your attention to this collar, inasmuch as it allows of motion upon the rods of the splint; whereas, in the lower collar of the instrument, you noticed that it was perfectly immovable and could not possibly be moved upon the rods, as in this upper collar. If, now, both of these collars were movable, you could not retain the leg in any one position, for the simple reason that the collars would tilt upon themselves, and thus, while the upper edge of the lower collar and the lower edge of the upper collar would press in upon the leg and cause excoriations, your extension would be lost and the joint surfaces brought together, and the disease within the joint, instead of diminishing, would increase. I mention this the more especially as it is but a few weeks ago that a child was brought to my office wearing an extension knee-splint, in which both collars were movable, and which was made by Tiemann & Co. The physician who brought the child to me came from Canada; he told me that he wrote for my splint, and received such a one in return. Now, I wish to be distinctly understood upon this point, and cannot impress upon you too strongly the necessity of one collar being firmly fixed and immovable upon the extension-rods, for it is only those that I use; the other, in which the two collars are movable, is perfectly useless, and is not my splint. The same thing has occurred to me in the splint made by Shepard & Dudley. The splint which I here show you is made for me by Reynders & Co., 303 Fourth avenue.

Having now secured both upper and lower collars in a similar manner, still leaving the knee exposed (see Fig. 4), I now take my key and make the requisite extension, which will be when my patient tells me he is free from pain. You will notice that, while doing this, my hand is under the upper third of the leg, pressing upwards. This is to prevent the anterior surfaces of the joint from being brought together while I am making extension. Having now secured the requisite extension, and the patient being free from all pain, we shall endeavor to secure the absorption of the effusion around the joint, and for this purpose I now take some strips of adhesive plaster about an inch wide, and bind them firmly around the joint, leaving no place uncovered; by this means I secure an equal pressure all over the joint surface. Having accomplished this, I now pass a roller-bandage around the joint over the plaster, and thus retain them in position (see Fig. 5). Anyone

FIG. 4.

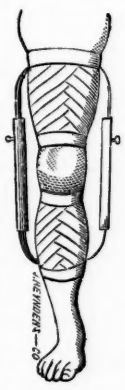


FIG. 5.

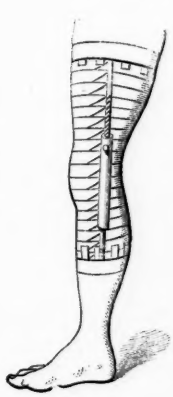
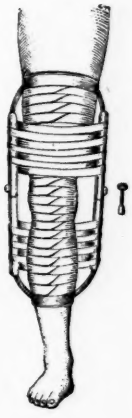


FIG. 6.



looking at that leg now, would perhaps suppose that was the end of the dressing; and I regret to say that I have seen some students who manifested so little interest in

[1] The strips of plaster on both thigh and leg should be longer than they are represented in this cut.

the pursuit of their studies, and although, perhaps, wishing to see the instrument applied, would rush from the lecture-room because it was almost the close of the hour, and think they had seen enough to warrant them to apply the instrument if they should ever be called upon to do so; whereas, by this very thoughtlessness and carelessness, they lost one of the most important points in the application of this knee-extension splint; and perhaps by this very carelessness, when an opportunity offered, would ruin both their own reputation and the leg of the patient. I therefore desire you specially to observe this last and final application of the bandage, and make careful notes of the manner in which I apply it. You will notice that, having now bandaged the knee, I carry my roller up the thigh. passing it over the thigh in front and under the rods of the instrument, bringing it in front of the thigh only—not behind at all. By this means I press the femur back and assist in straightening the limb. Having done this, I now pass my roller down below the knee, but instead of passing it in front of the leg, as I did with the thigh, I pass it behind the leg and over the front of the rods of the splint, thus forming a cradle for the leg and still further straightening the limb. This last bandage, you will notice, takes the place of my hand, which I just now drew your attention to, as pushing the tibia forward to prevent any pressure upon the anterior surface of the joint (see Fig. 6).

You have now seen the complete application of the extension splint in disease of the knee-joint. But, supposing that your patient is very heavy, I should advise the use of a pair of crutches in addition, as the weight of the patient may cause the adhesive plaster to slip, and thus necessitate constant reapplication of the splint. If, however, it is a child, there will in all probability be no need for the use of the crutches, and it can run about with the splint as you have just seen it applied.

Case I.—This boy, whom I now present to you, was brought to me some time since suffering from disease of the knee-joint. He was then nine years of age, and out of a family of nine children the only one who is in any way failing in health. He was strong and healthy until he was four years old, when, I am informed by his mother, he was supposed to have had some trouble with his kidneys, and shortly after he was attacked with otitis of both ears, ending in perforation of the drum, with more or less discharge up to the present time. You have all observed that, in addressing him, he is compelled to use an ear-trumpet.

Some four years ago a swelling was observed upon the inside of the right knee after exercising. He was taken to a distinguished surgeon of Philadelphia, who, the mother stated, advised massage and gentle motion. Failing to get relief under the treatment, and the swelling still increasing, another eminent surgeon was then consulted, he giving his opinion that it was white swelling, and advised a course of constitutional treatment with the external application of iodine, no mechanical treatment at that time being advised. The leg becoming flexed, the attending surgeon afterwards ordered an instrument for the purpose of bringing the leg straight; but the *main feature* required was lacking in the instrument, there being *no extension* made with the endeavor to straighten the limb. No relief being obtained by the constitutional treatment, or the mechanical appliance, after two years of this method of treatment, and the disease still increasing, the attending surgeon then advised amputation of the limb. Before consenting to this, however, the father decided to bring the boy to me. At the time that I saw him the knee had lost all its contour; there was a large abscess over the joint, fluctuation extending two-thirds up the thigh. On the inside of the inner condyle was a sinus, into which a probe could be passed through the joint, emerging at the upper portion of the tibia. The leg was flexed at an angle of forty-five degrees, and the least motion caused intense pain. The measurement being taken over the patella, gave eleven inches against eight and a half inches around the sound limb; below the patella, the diseased limb measured ten and one-eighth inches against eight inches below the patella of the sound limb, the muscles of the calf of the diseased limb being greatly reduced in size, owing to disuse. Upon making traction upon the leg in the line of the deformity, *e. g.*, in the two directions, as is my usual custom in disease of the knee-joint when the limb has become greatly flexed (see Fig. 1), immediate relief was obtained. I therefore determined to delay amputation until he had had the advantage of my plan of treatment, and at once ordered him to be placed in bed and extension made in the two directions, previously making a free opening into the joint, passing a rubber drainage-tube through the knee from the inner condyle to the outer portion of the tibia, and another one from above the knee and aspirating the abscess at the thigh; these operations being performed antiseptically, the joint being tightly strapped and the limb carefully bandaged. The extension was maintained for six weeks, until the limb had been brought sufficiently straight, so that the extension knee-splint could be applied in the manner already described. This has been reapplied from time to time, as occasion has required, and extension made within the limits of prudence, until, as you see, the leg has been brought almost straight.

He comes to me now able to walk upon the leg without pain or discomfort, the sinuses having since closed. The result is much better than I could dare anticipate; but I am in hopes of securing still better results, as I shall presently show you.

I refused to operate when he was brought to me, as he was in such a miserable condition that there seemed very little hope for his life if amputation were performed. I thought then it would be an excellent recovery if he could be cured with ankylosis. I now find the patella quite firmly attached, but by using a little force I can secure slight movement, although it causes considerable pain. Now, by bearing down upon the leg, I can bring the limb almost to a straight line, and having secured such a condition of things, I feel inclined to do more than to let him go with the limb in its present position. I certainly see no reason why it should not terminate in a movable joint.

You see that I move the tibia on the femur easily enough, but the patella does not move at all. If I can succeed in loosening the patella, I am quite certain that something can be done by developing the quadriceps muscle. This is a lesson of practical value, and I hope you will see the importance of the continuance of further treatment; although, in this case now before you, we have a most satisfactory and remarkable recovery. I

have ordered an instrument to be made by which the leg will be thrown forward. The principle is to carry your treatment up to the point of endurance, but not to a point of exciting fresh inflammatory action. Remember, that if by your passive movements and massage you create heat and pain in the joint, and they have not disappeared on the following day, then you have carried it to excess, and should, therefore, give the joint perfect rest, with the application of cold water, until all inflammatory action has passed away.

Now, I desire you to understand the importance of motion and massage at the proper time. During the active progress of the disease, *rest, rest, rest,* is the essential element of the treatment, and at the same time extension sufficient to prevent pressure of the diseased surfaces against each other, induced by reflex muscular contraction. But when the inflammation has subsided, and all morbid action has disappeared, then passive motion may be instituted for the purpose of preventing ankylosis.

If you understand the principles of this, you will have no difficulty in these cases of ankylosis; and remember that you have no right to stop until you have secured all that is attainable.

Note (nine months after).—There is now excellent motion in the joint, the patient being able voluntarily to extend the leg to almost a straight line; and can flex the knee to a right angle. He can now run around with ease, and this winter has skated with his companions.

Case II.—This man, aged forty-two years, comes here from Nebraska suffering from what is sometimes called hydrarthrosis. You will notice how immensely this left knee-joint is swollen. Upon taking the measurements we find its circumference to be: Above the patella, twenty inches; at the upper edge of the patella, twenty-one and one-half inches; at the lower edge of the patella, eighteen and one-quarter inches. The measurements of the knee of the sound leg are: Above the patella, thirteen and three-quarters inches; at the upper edge of the patella, thirteen and one-half inches; at the lower edge of the patella, thirteen inches. You observe that he can flex the leg perfectly and extend it almost to a straight position, and can also walk upon it. He states that he has been to the Hot Springs, and to one of the hospitals in St. Louis, and has had numberless applications to the knee, but to no avail. He had the knee aspirated twice in St. Louis, a quart of fluid being removed on each occasion, he states; this, however, I think is doubtful.

He tells me that previous to this difficulty, while carrying a pail out with feed for his hogs, he slipped and fell, striking the side of the knee violently, since which time the knee has gradually assumed its present proportions. The difficulty in this case is that while able to walk upon the limb, he can never be sure of it supporting him, as without a moment's warning it gives way and throws him to the ground.

On examination I find that the external condyle has been fractured off, and as you here see, I can take the whole piece in my fingers and slide it up and down as I wish; while if I take hold of the internal condyle and attempt to make motion, I move the whole thigh. We have, therefore, an ununited fracture of the external condyle with this enormous swelling of the joint. Now what can we do here? The only way is to have some artificial support for the limb, to prevent the man from having these sudden falls. This support must be designed to keep the leg in position, so that when the weight of the body is brought upon the leg it cannot be thrown off its point of bearing. Mechanical means is the only treatment which can be of advantage in these cases.

ORIGINAL ARTICLES.

NOTE ON THE USE OF HYDROBROMIC ACID IN EPILEPSY.

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THE researches of Dr. Reichert in the physiological laboratory long since showed that hydrobromic acid is so nearly equivalent to the bromide of potassium, that it ought to be able to replace the salt to a considerable extent in practical medicine, as being more agreeable to the taste, and not having any potash in it to increase unnecessarily the depression of the circulation and disturb the general nutrition.

Nevertheless, the verdict of those neurologists who have used hydrobromic acid has been strongly against it, and my own earlier experience coincided with this. Thinking over the matter, it occurred to me, that this negative result had been caused by the failure to use the remedy in sufficient amount. One or two teaspoonfuls of a three per cent. solution (Fothergill's formula) seems to have been a common dose.

The acidum hydrobromicum dilutum of the United States Pharmacopœia is a ten per cent. solution, yet one drachm of it is only equivalent in bromine strength to nine grains of the potash salt. A teaspoonful of Fothergill's solution represents scarcely three grains of the bromide. It is plain, therefore, that much larger doses of the acid should be employed.

In my ward at the Philadelphia Hospital there are twelve cases of old, severe, essential epilepsy, which from August 13, 1883, to September 15th, were taking each seventy-five grains daily of the bromide of sodium, and in most of which the acne and other evidences of bromism were very pronounced. During the thirty-three days these twelve patients had two hundred and twenty-seven fits. Of these fits one hundred and thirty-two occurred during three days in one patient, and probably should be deducted, for the purposes of comparison, leaving ninety-five as the number. The patients were then left fifteen days without medicine, were then given a half fluidounce of the officinal hydrobromic acid three times a day for twenty-three days; after this the dose was increased to six fluidrachms for six days; then to one ounce for forty-three days. After this, for sixty-two days, they were given each ninety grains of the bromide of potassium daily. The results are expressed in the following table.

The smaller number of fits in the first entry of the second column is obtained by deducting from

the whole number the many fits occurring during three days of epileptic status in one person.

Medicine, Daily Dose.	Number of Days.	Number of Fits.	Averages number of fits occurring in the 12 patients conjointly, per day.
Bromide of sodium, 75 grains.	33	227 (or 95)	6.9 (or 2.9
No medicine.	15	241	16.1
Acidum hydrobromicum dilutum, f℥iss.	23	81	3.5
Ibid. f℥ijf℥ij.	6	12	2.0
Ibid. f℥iij.	43	79	1.8
Bromide of potassium, 90 grains,	62	132	2.2

It will be seen that the effect of the acid in reducing the number of fits was directly proportionate to the dose, and was very pronounced. When three fluidounces were given daily, the number of fits was reduced to about one-tenth of those which occurred when no remedy was administered: whether the great number of fits which happened during three days of epileptic status is deducted or not from the roll of the sodium bromide, the effect of the acid was much greater than that of the seventy-five grains of the salt.

Even the largest dose of the acid was better borne than were the seventy-five grains of the bromide of sodium. The eruption of acne was much less universal, and when present much less severe, whilst the peculiar apathetic countenance of bromism was entirely wanting, although it had been very distinct in several of the cases whilst the salt was being administered. The effect of a daily dose of ninety grains of the bromide of potassium upon the recurrence of the convulsions was not as great as that of the full doses of the acid, but the bromism produced was distinctly more severe.

The acid was given after meals, with an equal amount of ginger syrup. Each dose was diluted with a full half pint of water, and no evidences of gastric irritation or other disagreeable symptoms were produced. It must, however, be borne in mind that the cases were old epileptics from the lower ranks of life, and in robust general health, with insensitive, powerful digestive organs, so that I think in private practice these large doses should for the present be used with caution. I have, however, given half ounce doses to a delicate girl without perceptible evil effects of any kind.

1925 CHESTNUT STREET, PHILADELPHIA,
December 14, 1883.

SOME POINTS IN THE DIAGNOSIS OF BRIGHT'S DISEASE.

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THE name of Bright's disease has been attached to so many and such varied cases, and has lately been so broadened by high authorities, that a little inquiry into the correctness of this very general application is by no means undesirable. An excellent way to clear up one's ideas on the subject is for the student, or, still better, the practitioner, after he has become well indoctrinated into the pathological anatomy and symptoms as taught in the text-books, and after having made sundry excursions into the more speculative regions of "high tension" and "lithiasis," to consult the works of Dr. Richard Bright, when he will realize how much travelling in a circle has been done since they were published, and might be tempted to remark that what Dr. Bright didn't know about Bright's disease isn't worth knowing. This would, however, unless looked at simply as expressing his just admiration for the completeness of the discovery of that eminent physician, be a decided exaggeration. One of the points which he did not know, and which have since been found out, is the extreme frequency with which some symptoms of the affections going under this name are met with, as consequent to or associated with other diseases, where they assume entirely a secondary rôle in importance. What he did not know, and what no one yet knows, is the nature of the connection, so well understood to exist, between the cardiac, vascular, nervous, and renal changes. At present the fact is so well known that many affections which would once have been characterized as independent diseases, such as apoplexy, dropsy, and cardiac disease, are very likely to depend upon, or to be associated with, a chronic nephritis which has before given no decided sign of its presence, that this condition is likely to be diagnosticated as an explanation of almost any sudden and serious set of symptoms, and the diagnosis may be sustained by the exhibition of what are supposed to be the pathognomonic features, viz., albumen and casts in the urine. Thus, a case of coma from opium-poisoning may present a very close resemblance, not only in the general condition, but in the state of the urine, to the sudden supervention of so-called uræmic symptoms.

The public is willing to accept Bright's disease as an explanation of almost anything obscure or unexpected. Any middle-aged or elderly man who has a pain in his back, a little difficulty in urinating, or, on the other hand, some incontinence of urine, or who notices in his chamber-pot on a cold morning a deposit, full, to him, of the direst forebodings, but known to the chemist as urates, can be made to believe that he has Bright's disease as easily as a broken-down anæmic woman, with a pain in her back, can be persuaded that she has "womb complaint."

The amount of truth in the two cases is enough to save the doctrine from contempt, and make it worth while to consider some of the mistakes in diagnosis somewhat seriously.

The desirability and importance of setting right the misapprehensions of a supposed sufferer are by no means small, from the amount of mental relief which is thus given, and the question loses none of its importance when considered in reference to the advertisement of "cures" and stories of wonderful recoveries.

It is not necessary, of course, to point out to physicians that neither pain in the back nor its absence, nor the irregularities in urination just mentioned, have any direct value in the diagnosis of Bright's disease, but there is reason to suppose that some other symptoms have attained a position of somewhat exaggerated importance in the minds even of the profession, and are considered more conclusive than experience shows them to be.

Albuminuria is now so well known to occur in a great variety of diseases, and even in some conditions not involving serious or permanent impairment of health, that it is to be looked on rather as a reason for further inquiry than as having by itself a very distinct meaning. Casts, especially of the hyaline variety, are not so generally known to belong very much in the same category. While the writer does not agree with Charcot in believing that casts may occur in a healthy urine, any more than that a purulent sputum comes from a healthy bronchus, it is undoubtedly true that they are often found under circumstances where nothing more than a temporary disturbance of the renal circulation, or some local irritation, exists as a cause. The kidney may be more or less affected, but it is not so primarily, and the renal trouble is not the essential one. Thus, it is not unusual to find a case of valvular disease of the heart, or even of general failing health, connected with fatty degeneration of the heart and consequent feeble circulation, suspected of being Bright's disease from the presence of albumen and casts in the urine. The renal atrophy of old age is not infrequently attended with casts.

If we turn to another symptom, which is of the highest importance in diagnosis, which should always be inquired for, and, if necessary, investigated by daily measurements, namely, polyuria, we find ourselves confronted with another set of difficulties. Of course, the practitioner will not allow himself to be led astray by the statement that the patient arises several times in the night to pass water. This is, to be sure, a suspicious circumstance; but it may arise from a local irritation, or even from simple nervousness. (In the latter case, by the way, the valerianate of zinc has been found a very effectual remedy.) A real polyuria may exist in surgical cases from irritation of the neck of the bladder, retention of urine, and back water in the kidneys, or from a renal calculus. This may be accompanied by albumen and a few transparent casts, and is dangerously near to the line which separates irritation from a chronic interstitial nephritis, which is not infrequently the final result. It is not, however, Bright's disease, and the distinction is a highly important one, since, if the local obstruction or cause of irritation can be removed by surgical measures, the renal atrophy is not necessarily progressive. This kind of polyuria is to be distinguished by the presence of the causative lesions, and especially by the presence of an excess of mucus, pus, and epithelial elements from the urinary passages.

A moderate polyuria of nervous origin, or, in other words, a mild diabetes insipidus, may, from the presence in small amount of the abnormal elements we have been considering, assume the appearance of chronic contracting kidney. The difficulties of diagnosis are by no means slight when we find ourselves in the presence of a case involving not only polyuria with albumen and casts, but nervous symptoms, such as are commonly found in this combination, as vomiting and headache. A cerebral tumor may present the greatest similarity of symptoms to a chronic nephritis, and we may have not only the phenomena just mentioned, but, in addition, others which are more or less common in the two diseases. These are optic neuritis (although this generally presents points of difference, as it may be associated either with intercranial pressure or with arterial degeneration and retinitis) and also high arterial tension. This latter condition, although often present in chronic nephritis of the interstitial form, is too frequently found in other affections to have the supreme importance recently attributed to it, either in reference to diagnosis, pathology, or treatment. The writer, several years ago, was demonstrating a sphygmograph to a little circle of medical friends, and just as the instrument was writing off a tracing which should have been highly characteristic of Bright's disease, or chronic interstitial nephritis, on the wrist of a gentleman about sixty years of age, another asked, "what is this high-tension pulse they are talking about now?" The question was evaded as well as possible, but the subsequent career of the patient, if so he could be called, as well as that of another member who gave a similar tracing, was watched with much interest. The first died about three years afterward, but as both the symptoms and the autopsy showed in the most conclusive way, of cirrhosis, not of the kidney, but of the liver. The second is still, at the age of seventy or thereabout, actively practising his profession.

The symptoms which are most characteristic in each of the affections mentioned above, which are to be specially sought in any case of doubt, are in cerebral tumors, *localized* headache, paralytic conditions of limited groups of muscles or spasm of corresponding groups, and the etiology, which is likely to be syphilitic. For the nephritis, we have the cardiac hypertrophy and the dropsy, usually slight. It is, however, but rarely that the two diseases will approach so closely that the analysis of the urine affords no assistance in making the distinction.

Migraine may be closely associated with polyuria, albumen, and casts, and then certainly makes about as perplexing a problem as can well be met with; one which it is probable can only be solved by time, and even then not so conclusively as to leave the physician and patient altogether free from unpleasant doubts.

It is, of course, open for any one to say that such a case is only in the early stage of a chronic form, and it would be almost impossible to disprove such an assertion. The writer has had under observation for some years a lady who has for a long time been subject to severe headaches, with vomiting. She has had constantly a small amount of albumen and a few casts in the urine, which is rather abundant and of low specific gravity. The sphygmograph

shows somewhat high tension. This looks like a pretty clear case of progressive interstitial nephritis, but although the headaches are perhaps more severe, in the intervals the patient is able to be out and about. At one time she greatly improved under a milk diet, and there has been no appearance of the more characteristic symptoms, such as cardiac hypertrophy or dropsy. Time alone in such a case can assure us that chronic interstitial nephritis will not become more manifest, and go on to the usual termination.

Some of these obscurities in diagnosis may help to explain many of the "cures" of Bright's disease. While the writer would not be understood to deny the possibility of an arrest of a chronic nephritis of either form, which may amount to a cure with a more or less damaged but still sufficient kidney, yet the ordinary professional and lay opinion as to the extreme rarity of such an occurrence, is undoubtedly correct; and few of the cases where a complete recovery from chronic Bright's disease is said to have taken place, will bear a close scrutiny. Where the diagnosis is that of the ignoramus, or of the interested quack, it is not worth while to spend time in accounting for remarkable cures. The explanation is very simple. As has already been said, it does not require a specially credulous patient to accept such a diagnosis, and the marvellous feats of therapeutics are very easy if the intending performer has the opportunity to make the diagnosis to suit himself, and retain it uncontradicted. In other cases, however, I believe that mistakes have arisen from, firstly, the very distinctly intermittent way in which many cases of Bright's disease pursue their course, or perhaps to the occurrence of exacerbations which disappear under the influence of rest, warmth, and appropriate treatment, and give place to decided improvement, which may be taken for recovery. I have seen a man with parenchymatous nephritis, marked cerebral symptoms, and great dropsy, leave the hospital well enough to make a voyage to sea before the mast, and return with the same symptoms, of which, although I have lost sight of him, I have no doubt he finally died. Again, an attack of acute nephritis does not always begin with pain in the back, fever, and exceedingly scanty urine, which at once signify its character; and if appearing, as it not very rarely does, simply as a rapidly increasing dropsy without marked pyrexia, cerebral phenomena, or in fact any of the classical symptoms to announce its true character, it is very likely to be taken for the development of a previously latent chronic disease. If this suspicion is taken as a certainty, and the patient then recovers, the case passes for one of a wonderful cure of Bright's disease, instead of what it really is, the usual and natural result of acute nephritis. Even in the nephritis of scarlet fever some of the signs, especially casts, may hold on so long as to deceive one into thinking of chronic rather than of acute disease.

In some one of these ways nearly every one of the reported cases of "cure" can be accounted for, without either doing great violence to our only too well-founded pathological ideas or impugning the good faith of lay narrators.

THE ETIOLOGY OF TYPHOID FEVER.[1]

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THE most important questions relating to the etiology of typhoid fever are, whether it is alone spread by direct or indirect contagion, or whether it is possible that the cause of the disease at times originates independently of a person sick with the disease. In other words, assuming that a bacillus is the cause of this disease, does such germ only come from some one suffering with an attack of typhoid fever, or does it exist more or less widely distributed in favorable localities, having no connection previously with typhoid fever, but occasion the disease when it has found an entrance to a proper subject? These questions have been the occasion of considerable dispute in the past, nor is such matter settled yet beyond controversy. There are many difficulties in the way of a satisfactory examination of the subject, and in not a few cases we are unable to reach a positive conclusion.

In rural districts and in institutions, typhoid fever seems not infrequently to spread by contagion, as person after person sickens with the disease. Yet in not a few of these instances it can be shown that such contagion is not direct, but indirect. In studying this question of contagion, we are obliged to examine the matter in two ways. We must first satisfy ourselves that the person sick with the disease contracted it at the supposed place; and, secondly, that there was no other rational explanation for such sickness than that of the emanations from the sick. To go more into detail, when a person who is in contact with a patient suffering from typhoid fever contracts the disease, the following possibilities are presented for solution—assuming that, because of continuous residence in the place, the only question is from what in that place was the disease obtained:

1st. The same cause which operated in the production of the first case may have been again efficient.

2d. The excreta from the sick may have produced contamination of the drinking-water, or may have found their way into cesspool, sewer, etc., and the active principle of the disease become reproduced, and, being received by the second person, caused the sickness.

3d. If we can satisfy ourselves that in neither of these ways, nor by any of the other avenues through which the typhoid fever germ gains admission to the system, was it probable or possible for the patient to have contracted the disease; then, and then only, are we forced to the conclusion that the contagion was direct. We must admit that there are many loopholes, and that very few cases would stand a rigorous examination and be capable of proving that typhoid fever was spread by direct contact. In not a few cases we will be obliged to say that it was possible, not certain. In those instances where I have examined into this matter I have not found one by which I have been forced to this as the

[1] A paper read before the New York County Medical Association, February 18, 1884.

absolute and only conclusion. The negative side of the question, too, must be examined in order to estimate the extent of this danger, if such exists. Error is very liable to occur if too much reliance be placed upon this method of procedure; nor is it safe to say that because ninety-nine have not taken the disease, though directly exposed, that the hundredth person did not. The usual method of studying this aspect of the case is to cite the instances of hospital nurses, attachés, and patients, waiting upon or in close proximity to typhoid fever patients by reason of occupying the same wards, and to show that these either did not or did in no considerable numbers sicken in consequence. Those who believe in contagion cite those who contracted it under these circumstances as instances of direct contagion; whereas, the opponents endeavor to offset this by supposing that such instances are to be explained upon the basis of imperfect sewerage of such hospital, etc. The frequency with which typhus fever is contracted under similar circumstances is used as a foil by those who are opposed to accepting the idea of direct contagion.

The writer has had considerable opportunity of watching the difference manifested by these diseases in this respect, especially with reference to hospital nurses. He is obliged, however, to admit that he has known instances of physicians, nurses, and patients contracting typhoid fever in an institution where typhoid fever was received. On one occasion a house physician sickened with the disease, but at the same time an employé of the hospital, who had no contact whatever with typhoid fever patients, but who was exposed to emanations from the same line of sewer which was imperfect in in its arrangements, and was in the physician's room, contracted the disease. During the past autumn three nurses who had been attending typhoid fever cases were under his care; two of these had typhoid fever, the third had probably aborted typhoid fever. But in each instance sanitary defects existed in the hospital or house where the disease was contracted.

Moreover, with reference to the nurses in hospital, four patients contracted the disease at the same time. Two of these occurred in wards in which no typhoid fever was received, and it was necessary to admit that direct contagion could not have been efficient in their cases. They, however, used water-closets in connection with sewers receiving typhoid fever excreta, and more or less imperfect. The nurses were exposed to these same sewer emanations, as well as to the direct emanations from the patient. The writer, moreover, had reason to believe that the disinfection of the passages from the bowels was imperfectly performed. In order to arrive at a just conclusion in this matter, an inquiry has been made at several other hospitals receiving typhoid fever patients. The result of this inquiry is in the main negative. All claim that no nurse or patient in the wards contracted the disease; but in one, some years ago, one of the physicians contracted typhoid fever while residing in the hospital, and in another a domestic sickened with the disease.

The hospitals interrogated have been the New York, Presbyterian, St. Luke's, Mount Sinai, Riverside, and Bellevue.

The result of this part of the investigation is that typhoid fever does, at times, occur amongst those resident in a hospital receiving patients with the disease, but that the number of cases where this has not taken place would point towards failure of disinfection or to defect in the plumbing of the institution. Such occurrence, too, is an illustration of another fact—the spread of the disease by the sewers independent of the ground water.

The principal source of typhoid fever in New York City is to be looked for in defective sanitary arrangements, permitting the entrance of the emanations of the sewers, either to the air or to the drinking water of which the patient makes use. In a large city, and particularly in the fall of the year, these sewers receive enough germs from typhoid fever cases to make any investigation as to whether the disease arises spontaneously, or always from germs which have been derived from the excreta of typhoid fever, impracticable. It would be a great mistake to suppose that invariably where sewer emanations gain entrance to a house, and even where the defects are very great, typhoid fever will appear. The writer has seen marked exceptions to such an idea; exceptions which, together with the susceptible character of those exposed, only prove that something more is necessary than ground saturated with water and sewage in order that typhoid fever should occur. Diphtheria has sometimes occurred under such exposure, and not typhoid fever. Again when apparently far less vitiation of the air has occurred, typhoid fever will break out. In other cases, the defects have existed for a long time, the so-called sewer gas has been vitiating the air, but no typhoid fever has appeared; when at length one or more of those exposed sicken with fever.

Such illustrations show that it is not as is so frequently supposed by the laity, or as is often laxly said, the sewer gas, but something added thereto, which has gained entrance to the system through these sanitary defects. Many suppose that the determination of the question as to the method by which the poison gains entrance to the system is easy, whether by the air or by the drinking-water. But the writer has found in a number of cases that the determination of this matter is not of such easy solution. If we suppose that germs are floating in the air the question must be again raised, Do they occasion the disease by being received through respiration and by the lungs, or are they by this act simply drawn into the mouth and throat, and thence swallowed with the saliva, food, and drink, to develop in the alimentary tract? The writer thinks that this latter is the method more probable.

Anyone who has examined much the sanitary defects in cases of typhoid fever, will find that vitiation of water is in many cases possible, especially at the present time, with our defective water supply and water pressure. The drawing of water on a lower floor causes a partial vacuum, which, if stopcocks are open, or if tanks supplied by ball-floats, which open the pipe when the water is lowered, are more or less empty, or by defective valves to pipes

on water-closets with direct supply, causes an aspiration of air into the water-pipes of the house. How forcibly this suction is, anyone can estimate by allowing the water to run on a lower floor, and then opening a stopcock connected with the pipe on a higher story. The same danger exists through the overflow-pipe of tanks when they discharge into sewer-pipes. The writer has traced outbreaks of typhoid fever in two institutions to sanitary defects of this nature, and operating in this way. Occasionally much more radical defects are witnessed, and that at times in houses which have been pretty carefully examined. The writer has seen water-pipes connected with the sewer-pipe of a house. This is very ordinary for the discharge of the water from the boiler in the kitchens of our houses. It would be difficult to suppose that this could, under the circumstances of its position, and the relation of the pipe to the range, be a source of trouble. But the connection of a small pipe from the supply-pipe of a water-closet directly with the sewer-pipe of a house is a menace of a more serious nature.

There are cases on record of severe outbreaks of typhoid fever, due to the sucking of sewer-air and its accompaniments, or even of some of the liquid sewage, into the water-pipes of an institution or of part of a town. Such accidents happen when the water supply is intermittent, or has been for any cause withdrawn from a district and the pipes been emptied of water. In these cases, where small leaks are in proximity to defective sewers and drains, or by methods above indicated, either liquid sewage or air from such source may be drawn into the water-pipes. The experience of Liverpool, in its attempt to increase its water supply by cutting off waste and leaks, shows that there is more danger of this than many would suppose, who think that where there is a leak the outward pressure will always prevent harm. When we read that it was impossible for the steam fire-engines to obtain water at a recent fire, we see a source which is not alluded to of drawing by suction, through defects, dangerous matter into the water-pipes. Much, of course, of such harmful matter would, under the circumstances, be again discharged; but the fact of the ready emptying of the mains by powerful suction is ominous.

Attached to the tenement-houses of New York City, a large number of privy-vaults still exist. There is but one form of these places which is devoid of danger if properly cared for. The school sink or trough-closet does not admit, except by gross carelessness, of that accumulation of filth which is the abomination of those other places; moreover, it can be readily cleansed and disinfected in case of typhoid or other infectious disease appearing in the house. The question of origin in such cases, with or without the germs from a pre-existing case of fever, is in a large city as impossible of a just decision as in the case of defective sewerage.

The following illustration will exemplify this: A pedler, who was a patient with typhoid fever in Bellevue Hospital, stated that he had been affected with the diarrhœa of this disease for the week preceding his admission to the hospital, and that during that week he had plied his vocation in different portions of the city, using, as the occasion demanded, the conveniences of tenement-houses. He admitted that he had probably visited forty-eight such places during the week. The writer knows of no recorded instance on this matter which better shows the possibilities in this direction.

That such places serve to develop the poison of typhoid fever there is sufficient evidence, and the method of action may be in one of three directions: 1. By the use of the place. 2. By the leakage from such places causing saturation of the soil beneath a house. 3. By the connection of the living rooms of a house with such places by waste-pipes. The writer has seen cases which justified him in believing that in each of these ways typhoid fever was contracted. The attempt to remove these places and to cause the substitution for them of trough-closets, or a proper form of water-closet, has in the past been the cause of considerable difficulty between the owners of tenement-houses and the Board of Health; and the writer is obliged to add that the courts have at times taken the ground that such places are not nuisances *per se*, but only that in individual instances they may become nuisances.

For several years the Board of Health has refused to allow any to be constructed. But under the law the tenement-house owner has the option of a trough-closet or some form of water-closet. The writer has feared that, with the defective water supply and consequent deficient flushing of soil-pipes, an increase of typhoid fever might result from the introduction of water-closets in the tenement-houses on a large scale. In how far some of the increase of the disease may be attributed to this cause he has been unable to learn. Fortunately a portion of this danger has been avoided by the plumbing law, through whose instrumentality the Board of Health can locate the position, and regulate the construction of the plumbing. The Board cannot, however, prevent misuse, and cause constant cleanliness to be observed, but too often can only act when the evil has occurred. The moral responsibility rests with the owner of the property to prevent evil by the enforcement of thorough cleanliness through proper supervision, and also by providing an ample supply of water for flushing.

The spread of typhoid fever by the use of polluted water in the city of New York is not limited to the methods by which, as has been pointed out, the Croton becomes contaminated. In the upper portion of the city, and especially in the annexed district, wells, with all the attendant liability of sewage pollution, are still in use. So, also, there are a certain number of wells within the built-up portion of the city. The writer was able to trace the outbreak of typhoid fever in an institution to the use of such water by the employment of the chloride of lithium test. The place was supplied both with Croton water and had a pump on the premises, within fifteen feet of which ran a sewer from the hospital building some five hundred feet away. Mr. Nealis, the Inspector of the Board of Health, had been detailed to examine into the cause of a number of cases of typhoid fever in the institution. He

found the disease mostly limited to the boys, in whose playground the pump was, though the institution contained both boys and girls. The plumbing of the institution had been thoroughly overhauled. These facts led him to suspect the pump. We advised that the drain going from the hospital be exposed, suspecting that we should find a leak, but though thirty feet were laid bare in either direction, the ground did not show the least indication of leakage. Moreover, a chemical analysis of the water did not prove it to be especially bad. Under these circumstances the writer suggested the use of chloride of lithium as a test. An ounce dissolved in a pail of water was poured down the sink of the hospital. Water was taken from the well an hour before this, and each hour for six hours subsequently, and on the next day. Dr. Waller, of the School of Mines, made a spectroscopic examination of the water, which showed no lithium in the water before or on the day after the journey of the solution into the pipes, but that it was present during each hour at which water was taken on that day. This showed undoubted communication between the sewer and the well. The disuse of the water was followed by cessation of the fever. The pump-water was used by the boys as they played, and also because its taste was preferred on the table to Croton water. As each of the boys who was taken sick was removed to the hospital, it can be readily seen that this furnished a very good means of propagating the disease. The writer does not know who first suggested the lithium test, but he has not heard of any other instance of its employment. [illegible]

In many cases the chemical analysis shows such evidence of sewage pollution, and the position of the well with reference to sources of contamination, cesspools, privies, etc., is so open to suspicion that it is very justly suspected of being the cause of an outbreak of the disease. But there is a caution necessary in that in each case all the possibilities should be carefully weighed, because, notwithstanding the use of polluted water, it may be that that has not been the direct exciting cause. Instances are common in which use has been made of such water for a considerable period without the development of typhoid fever. A single case of the disease in any locality does not afford the groundwork for fair reasoning. But when a number occur at the same time, or consecutively, then we have a basis upon which to rest. In an investigation which the writer made of the causes for an outbreak of the disease in a neighboring college, the method of procedure can be illustrated.

He had charts furnished him showing the name of each person sick, the date of sickness, the boarding-place, and the building in which his room was situated, and so far as possible what he drank. There had been some thirty cases of fever, which seemed to be distributed pretty generally in the different college dormitories. But an investigation started in this manner showed that though the first six to come down with the disease lodged in different buildings, yet they all took their meals at the same house. Moreover, in these dormitories at that time no other serious sickness occurred. Hence this house became justly suspected of originating the trouble. Later it was discovered that a servant employed in that house also sickened with fever at the same time.

Within this house was a water-closet discharging into a cesspool with earth sides and bottom, in a shale soil, forty feet distant from a well. The water of this well was found on chemical analysis to be seriously polluted. Another cesspool from the kitchen was also within a short distance. These six persons became ill, with one exception between March 15th and April 1st, all previous to April 1st.

The first to be taken sick not only had his meals, but roomed in the house with the suspected well. It was about the middle of May before other cases began to occur, with two exceptions. These, however, did not room in the college buildings. Four of the six thus taken sick in April had rooms in three of the college dormitories. The sewerage was by water-closet, discharging into two cesspools, in different directions. Some of the sick remained only a short time after coming down with the disease, but one stayed throughout the whole course of his illness. The excreta were thrown into the water-closet, and reached one of the cesspools. The overflow of this was obstructed by some of the neighbors, and was over quarter of a mile from the college. After the middle of May the disease became distributed to the different buildings connected with the cesspool. The water supplied to the college was tested frequently, but showed no chemical evidence of contamination. As a holiday had intervened, and, morever, as on the breaking out of the disease again it did not select the dormitory in which the sick student had remained, but affected particularly a dormitory which stood nearer to the cesspool; and, moreover, as radical defects were found in the arrangements which had been made for the ventilation of the sewer by a chimney in this building, it was rendered morally certain that the disease had spread, not by the drinking-water, not by the air, nor by direct contact, but by means of the emanations from the sewer and cesspool into which the passages from those sick with the fever had been thrown without disinfection. Moreover, the disease affected others in the town who had no intercourse with the sick, but only became affected through the vitiated sewer-air.

To show how negligent people are even after a warning, the writer may be pardoned for alluding to an occurrence in this same town over six weeks later. In the mean time the college authorities had done every possible thing to improve and remove the causes of the trouble. The writer had made a visit to the town with a view to ascertaining the amount of sickness still prevailing. He found that in two adjoining houses, using a pump in common, there was in the ground beneath the spout, a gutter which led into a drain supposed to be open, but which a short time before had been found closed. The people had been in the habit of throwing the slops from the house into this gutter, and it was proved that this must all have found its way into the well. Three of the people in these two houses had typhoid fever. Moreover, the writer heard of

an instance in which one of the students going home with the disease, several other cases had followed at his home. These were at first attributed to direct contagion, but they had emptied the slops and the wash-water in such a manner as to render pollution of the drinking-water a matter of great probability. Disinfectants had not been used, owing to the nature of the disease at the college not being known at that time. As regards the question of origin of this outbreak, whether spontaneous or from a previous case, the writer was unable to come to a positive conclusion. It is true that the first person sick had come from his home a little over two weeks before he became ill, but he had gone home in poor health several weeks before this. The cause of ill health was said to have been malaria. An inquiry by Dr. E. M. Hunt failed to prove that he brought the disease from home or that anyone else had been sick at that house or visited there after convalescing from a sickness.

The writer could enumerate other instances in which an institution in the country became affected, without any proof being obtainable that a first person had brought the disease.

Other avenues by which the disease may be introduced in a house, and of which the writer has seen possible, though not positive, illustrations, are by means of refrigerators having direct sewer connections, and containing milk and food. In such case the former would be the more probable vehicle.

The writer has been able to connect only one outbreak in this city with affected milk, possibly diluted with water coming from a contaminated well, etc., as in the cases reported from abroad, especially from England. One of these occurred this fall in a portion of London, and seems to have been pretty clearly traced to this source. The number affected was over four hundred. In the case above cited it seemed extremely probable that milk had been the vehicle, as the gentleman whom he saw in consultation only drank milk and Clysmic water and other probable sources had been excluded.

With relation to the intimate nature of the agent which produces the disease, the writer, without any such careful examination for himself, is prepared to admit that it is, in all probability, a bacillus, and that it is possible that the one which has been figured and described by Eberth is the correct one. All this chain of reasoning would seem to point to such an agent as a logical necessity.

The writer has reached the following conclusions with reference to the etiology:

1st. It is in all probability due to a bacillus.

2d. That this virus is certainly contained in the discharges from the bowels.

3d. That it gains entrance to the system through the air coming from places into which the discharges of other typhoid fever patients have been deposited; or through water contaminated by a similar process; or through milk diluted with contaminated water, or perhaps vitiated by contaminated air.

4th. That there are instances which point to the probability that the germs which produce typhoid fever may develop in a suitable soil, but not have been derived from a preëxisting case of the disease.

5th. That it is not necessary to invoke the aid of the rise and fall of the ground water to explain the disease; though a low state of the ground water, by favoring an increase of the impurities in a well or water supply, may favor the spread of the disease, as may also a sudden severe rain after a draught by washing impurities, including the germs of the disease, into the drinking-water.

6th. That the failure of the disease to spread when prompt and thorough disinfection of the excreta has been performed, as well as of clothing soiled by such discharges, makes it extremely doubtful whether the disease is communicated by the respiration, perspiration, etc.

7th. The writer has had no opportunity to study outbreaks of fever resembling typhoid, such as have occasionally been met abroad, and ascribed to the eating of diseased meat.

One feature in the study of the etiology of typhoid fever is of considerable importance, and is deserving of special consideration, in order that we may have more certain information in the future from a frank recognition of what is obviously a growing evil. The writer has frequently felt, in dealing with statistics on this subject, some uncertainty with reference to accepting the facts from the mortality statistics at their face value. Some years since the Board of Health endeavored to find out from physicians about the prevalence of the malarial group, and the Sanitary Superintendent, Dr. Day, addressed circulars and maps to a number of the more prominent practitioners, and those having the most extended practice, asking their coöperation; but the attempt came to naught through the lack of interest displayed and the failure of response on the part of the profession. So also in the majority of instances any inquiry by letter or otherwise with reference to a death certificate has been looked upon as a sort of insult, and by arousing an immediate antagonism has prevented any fair result being achieved. I may be allowed, having no longer any connection with the Board of Health, to ask of the profession a correction of these matters in the future.

The tables which the writer had made in connection with the study of this subject, give in detail the number of deaths which have been ascribed to each of a number of febrile diseases since 1852. A noticeable feature observed, is the change of nomenclature which has taken place. Until 1862, a certain number died simply of fever. So also the terms bilious, hectic, gastric, miliary, and nervous fevers were in use.

Of these, at the present time, only the term gastric is occasionally used. But then and now intermittent and remittent fevers are assigned as causes of a considerable number of deaths. The term typho-malarial came into vogue in 1871, as the cause of twelve deaths, and since that time has been employed with increasing frequency. So also continued fever, without specification, and congestive chills have been the terms employed to account for the fatal termination of disease in eighteen cases during the year 1883.

The result is that a large total is reached in each year by the malarial class of diseases, and in each of the last four years more deaths are ascribed to these diseases than to typhoid fever. Four hundred and sixty-nine in 1880, six hundred and five in 1881, four hundred and forty in 1882, and five hundred and twenty-five in 1883. In these numbers one hundred and thirty to one hundred and fifty-four deaths in each year from the hybrid typho-malarial fever are included. As far as New York City is concerned, the writer regrets the employment of this term. It has led to confusion, and has furnished a happy avenue of escape in doubtful cases; which, like many other easy roads and short cuts, lead into a quagmire of doubt and misconception. Moreover, it has prevented those proper measures from being employed which would prevent the spread of typhoid fever, and lead to an investigation of its causes. The writer has long insisted that the evidence of post-mortem examinations is opposed to the use of the term, and he has known cases which clinically seemed, and were asserted to be, typical of this combination, which only presented the ordinary anatomical conditions of typhoid fever. The writer does not mean to deny that in very malarious sections of country some cases of typhoid fever would show certain appearances of a by-gone or complicating malarial poisoning; but to assert that, so far as New York City is concerned, it must be extremely rare. In fact, cases considered typho-malarial are as far as the great majority are concerned typhoid; in a few instances they may be remittent; the rest are illustrations of mistaken diagnoses, tuberculosis, masked pneumonia, etc., being the condition present. Moreover, when we find it stated that four hundred and seventy-one deaths occurred from typhoid fever, and five hundred and twenty-five from intermittent, remittent, typho-malarial, and continued fever and congestive chills in 1883, this is in direct opposition to the teaching of post-mortem examinations. According to this, we should see forty-seven cases of typhoid to fifty-two of these other complaints.

The writer, from a long experience in hospital practice, can assert that true intermittent and remittent fevers proving fatal are not indigenous; they occur mostly in people coming from subtropical or tropical climates. For a long period he has given his attention to the place of origin of well-developed intermittent fever, and he has been surprised to see how large a proportion has occurred in non-residents, or those having a temporary residence out of the city and in a malarious region. As of typho-malarial, so of the rest of the class; some of these others are typhoid, others tuberculosis, internal suppuration, pneumonia, etc. But this uncertainty is of importance because it prevents the acquisition of true information about the increase of typhoid fever. Manifestly, it would be incorrect to class all or perhaps even half of these cases as typhoid. These cases, too, have a direct bearing upon the etiology of typhoid fever in that, by failure of the disinfection of the evacuations, and also of the places in which they are deposited, they serve to allow of the increase of the disease. In Bellevue Hospital six hundred and fifty-three cases of malarial fever have been treated during the past three years with only three deaths. The writer has not had time to make an inquiry of other hospitals upon this point, but there are those here who can answer it.

Year,	Typhus,	Typhoid,	Remittent,	Intermittent,	Bilious,	Chagres,	Congestive,	Gastric,	Nervous,	Total of diseases other than typhoid and typhus,
1852	662	147	79	10	26		22		51	137
1853	399	171	54	16	37	13	18	2	29	140
1854	390	189	72	34	41	22	23	10	53	202
1855	439	172	73	23	20	10	17	8	33	151
1856	231	158	102	33	37	4	23	5	25	204
1857	171	155	76	28	26	4	8	5	14	147
1858	126	211	70	22	16	2	22	6	35	138
1859	174	218	62	19	12	1	6	5	12	105
1860	198	232	45	4	31	1	16	7	20	103
1861	190	245	33	12	36	1	5	3	13	90
1862	136	417	30	12	14	2	3	7	13	68
1863	420	531	26	16	102	1	1		5	146
1864	764	661	37	15	107					159
1865	501	573	65	17	105					187

YEAR:	Typhus,	Typhoid,	Typho-malarial,	Remittent,	Intermittent,	Continued,	Congestive and congestive chills,	Total of diseases other than typhoid and typhus,
1866	433	514		102	26	2		130
1867	180	347		88	22			110
1868	137	329		111	21			132
1869	125	378		109	19			128
1870	96	422		147	66			213
1871	65	239	12	165	110	3		290
1872	86	364	22	193	111	10		336
1873	39	294	19	164	86		13	282
1874	14	275	30	148	104	7	6	295
1875	28	347	29	133	100	7	6	275
1876	20	283	42	119	63	8	5	237
1877	17	275	68	158	78	8	3	315
1878	4	245	76	170	99	7	9	361
1879	4	178	90	149	128	6	17	390
1880	3	241	131	150	165	11	12	469
1881	160	446	148	182	244	15	16	605
1882	65	362	154	155	207	8	16	440
1883	15	471	154	174	179	6	12	525

The relationship of age to the development of typhoid fever is of considerable interest. I have been unable to obtain the ages of the reported cases for this city, as such table has not yet been prepared. But in considering the tables of mortality for the last ten years, it will be observed that more than half the mortality occurred between the ages of ten and thirty. So also it will be noted that the disease is uncommon as a cause of death during the first year of life, only sixteen cases having been reported during the past ten years in a total mortality of over thirty-one hundred from typhoid fever during this period. Neither is it a frequent cause of death during the first four years of life, one hundred and seventy-five cases having been reported for this period. It will also be observed that the mortality gradually decreases for the ages over thirty, and

more particularly over fifty. Still three deaths are recorded from this cause between eighty and eighty-five, out of the totals above given; seven between seventy-five and eighty years, sixteen between seventy and seventy-five, and a total of two hundred and thirty-four above fifty years of age. The tables will give the number at the different quinquennial periods.

We can more readily understand the exemption of old age than that of infancy. There are, however, it seems to the writer, several reasons which are of importance in helping to solve the reason for this state of affairs. The diet of infancy is largely of milk and of mother's milk. Hence there is freedom in a great measure from one of the chief causes of the disease. There have been several outbreaks of the disease attributable to milk, but were there a very great danger from this source, then we should expect to have the tables reversed. Some may imagine that the characteristic changes in the bowels are not recognizable in infancy. There exist sufficient examples to disprove this idea. In fact, cases are cited which would go to prove the possibility that the disease began in fœtal life or just after birth, so as to force the conclusion that the mother might receive the germs of the disease and transmit them to the offspring without herself suffering from it. A greater probability is that some of the cases classed as entero-colitis, are due to typhoid fever poison.

A greater reason for the less frequent existence of typhoid fever in the earlier periods of life, relates, in the writer's opinion, to the fact that these infants are, in many instances, not alone less exposed to the danger from water, but also from contaminated air. When we reflect for a moment upon the methods employed for excremental removal in childhood, we shall see that they are in considerable measure removed from the danger of breathing cesspool or vault air.

A fourth suggestion is that, where danger from milk exists, this is in a considerable measure neutralized by boiling for preservation. The main intensity of the disease falls upon the last summer and early autumn months, during which many people are forced to resort to this expedient in cities.

A fifth hint is that mistakes are made in diagnosis, both as between typhoid and other diseases, and as between other diseases and typhoid fever.

As regards old age we have the increasing resistance of the system to the poison of certain other diseases, as well as of typhoid.

Deaths in ten years according to age:

Under 1 year,	16
" 3 "	175
5 "	203
5 to 10 "	243
10 to 15 "	416
15 to 20 "	554
20 to 25 "	371
25 to 30 "	319
30 to 35 "	204
35 to 40 "	159
40 to 45 "	138
45 to 50 "	112
50 to 55 "	68
55 to 60 years	55
60 to 65 "	49
65 to 70 "	36
70 to 75 "	16
75 to 80 "	7
80 to 85 "	3

The disease has prevailed here particularly during August, September, October, and November. The accompanying tables of reported cases and of deaths will show the facts in the case. The number of cases reported is not equal to the amount of the disease, nor can the proportion existing be accepted as a proof of liability to fatality, owing to the undoubted failure of certain physicians to report their cases.

A question of some importance arises whether the disease is increasing; as before stated, an uncertainty exists owing to the number of possible cases included under other heads. But I have had the mortality tables so arranged, that the fatality from typhoid, typhus, and the other fevers likely to be confounded, can be studied side by side. Since 1879, the writer knows that typhus means typhus, and for the four years before that the cases given as such in the mortality sheets, were only accepted on inquiry from the physician reporting such. The study of some of the previous years makes it possible that errors crept in, as when typhus was prevailing typhoid increased. It is a singular fact that many foreign cities still include the deaths from typhus and typhoid under one head. This renders a study of comparative prevalence of the disease difficult.

MEDICAL PROGRESS.

LIGATION OF THE EXTERNAL ILIAC ARTERY.—On December 11, 1883, DR. GAETANO DESOGUS performed the operation of ligation of the external iliac on account of a wound of the femoral artery. The patient recovered.—*Gaz. degli Ospitali*, January 16, 1884.

OSSIFICATION OF THE BRACHIALIS ANTICUS.—Many cases of ossification of the deltoid or of the adductor magnus have been observed among soldiers, and have come to be looked upon somewhat as professional lesions. RASMUSSEN now reports two cases of ossification of the brachialis anticus occurring at the military hospital at Copenhagen. After prolonged muscular effort, a tumor appeared in the middle of the muscular mass of the arm. It was very hard and painful, and easily distinguished from the biceps in front and the triceps behind. There was considerable functional trouble, and movements caused pain. Complete extension of the forearm could not be effected. The acute stage having passed off under the use of cataplasms, a sling and rest, the tumor was found to be reduced, but resembling an osseous growth from the humerus, and involving the brachialis anticus. After treatment, which did not exceed one month, the patients returned to duty. In one case the osteophyte diminished markedly in a month. Rasmussen is inclined to believe that the affection is caused by rupture of muscular fibres and of the fibres of the insertion of the periosteum; this is followed by an extravasation of blood, which is progressively transformed by a simultaneous regression and osteogenesis. —*Archives Méd. et Pharm. Mil.*, January 16, 1884.

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LEGISLATION REGULATING THE PRACTICE OF MEDICINE IN NEW YORK.

THE necessity of placing certain restrictions around the practice of medicine, in the interest of the community, has impressed itself upon the legislatures of many States, and has led to the enactment of various laws on the subject. The question as to the propriety of such legislative enactment governing the practice of medicine, naturally divides itself into two parts. First, is legislative interference desirable or necessary for the proper protection of the community, or in the interest of the profession, or both? Second, granting an affirmative answer to the first question, how far should such interference extend?

Anyone who is familiar with the state of the practice of medicine in England as it was forty years ago and as it is to-day, or as it is now in those of our own States in which efficient legislative regulation exists, as compared with that in which no such laws are in force, must admit that good results may follow such enactments. Exactly how much advantage has accrued to the community it is difficult to determine; but it is reasonably certain that money has been saved to its members, and permanent loss of health, and probably even of life, averted. That the profession must gain by the elimination of a class of unscrupulous and ignorant pretenders from those allowed to prescribe and dispense medicines is too evident to require demonstration.

It being clear that we may reasonably expect good to accrue to the community and to the profession by appropriate State legislation, in what should this consist, and how far should it go? In the first place, has the State any right to lay down the law to its citizens as to whom they should consult in any given illness, or forbid their taking any treatment which their own choice or that of their friends may select? Clearly not, so long as their own health, and not that of their neighbors, is jeapordized thereby. Prof. Huxley has justly said, in a recent address on this subject, "it would surely be a monstrous thing that a man having the toothache should not go into the first druggist's shop and ask the man behind the counter to give him something that would do him good." And we say, with him, "do as you please; go to anybody you like" for advice.

On the other hand, the State clearly has a right to insist that those whose certificates as to causes of death, or condition of health, it receives, or those to whom it trusts its immediate employés, or those upon whose opinions it depends for counsel, should have certain qualifications; that they should not be pretenders, or knaves, or blockheads. Not only this, but it owes to its citizens protection against such, by placing them out of their reach as far as possible—by depriving them of legal recognition. This is practically what is done in England, although we believe it is not commonly so considered. As we understand it, anyone who chooses can practise medicine in England, but he cannot, unless he possesses certain qualifications, be registered; and therefore cannot collect his fees, or give testimony at a coroner's inquest or in a court of law; nor are his certificates as to causes of death recognized. A man who is shorn of these prerogatives has not much to practise for.

The question next arises, How shall the proper qualifications be secured? It is evident that no laws would be necessary if medical colleges were what they should be; but as they are not, and are not likely to be for some time, some other measure must be taken to secure the end so much desired.

At the first blush, it would seem that the simplest and most efficient method would be for each State to appoint a Board of Examiners, independent of the medical schools, who should test the candidate for registration in the branches, a knowledge of which constitutes a thorough medical education. To say nothing of the difficulty of securing examiners with the requisite qualifications, two others are to be overcome before this idea can be carried out. The first is that of securing a Board independent of politics, the influence of which, always baneful, is especially destructive to the honest exercise of the offices of a body in which special educational qualifications should alone be the criterion of appointment.

The second difficulty may be more apparent than real; but it strikes us as being an essential one in

the way of the attainment of the highest objects of legislation. In the existing state of public opinion, it would, of course, be impossible to enact a law which does not acknowledge, in some way, the so-called systems of medicine, including, at least, homœopathy and eclecticism. To our mind, it is utterly incompatible for the adherents of these different systems to sit in the same Board, and for those of one system to vote upon the qualifications of the adherents to another, with the practice of which they not only are not familiar, but also the principles of which they believe to be false. It appears to us that the only consistent plan would be to have a separate Board for each system, which would result in a complication of machinery, most troublesome, if not impossible, to manage.

But let us briefly examine how the question has been practically dealt with. The laws which have been adopted by some of our States go further than we have suggested; others, not so far. The former not only refuse to register such as do not meet the legal requirements, but they do not allow them to practise under any conditions. Such are the regulations in Illinois and West Virginia. Yet these States recognize the diplomas of a large number of medical colleges, and do not go behind them. Others, as North Carolina, Alabama, and Mississippi, require all candidates for registration—those holding diplomas and those not—to appear before State or county boards.

We have before us copies of the most recent Acts proposed for the settlement of this vexed question. They are those presented by Drs. Sturgis and Wey, at the late meeting of the New York State Medical Society. Both Acts provide for a commission of nine men, practitioners unconnected with medical colleges, to be appointed by the Governor and to be called the Medical Faculty of the University of the State of New York. The Sturgis bill provides for "representation of the several systems of medical practice recognized by the incorporated medical societies in the State, in the proportion of six, two, and one." The Wey bill does not provide for such representation. According to the Sturgis bill, *all* persons desiring to practise medicine after the passage of the Act, shall be examined by said board in anatomy, physiology, histology, pathology, theory and practice of medicine, chemistry, surgery, obstetrics, materia medica and therapeutics, and such other branches as said faculty may agree upon, subject to the approval of the Regents of the University. But all candidates for the examination must give proof that they have received a diploma from some legally incorporated college.

In the Wey bill, graduates of New York medical schools are exempt from this examination, but the Act provides for the presence at the examinations by the college faculties of three members of the State Board or Medical Faculty of the University of the State of New York, who practically supervise these examinations. The expenses to and fro and twenty-five dollars a day to each of the members of the Board are to be paid by the medical school whose examination is supervised. The Wey bill does not specify the subjects on which the candidates are to be examined, but the questions are to be determined by the so-called medical faculty, subject to the supervision of the Regents of the University. The Medical Faculty by both Acts can revoke, for cause, the license conferred.

Both bills provide for the payment of considerable fees by the candidates; the Sturgis bill fifteen dollars on application and ten dollars on issue of license, the Wey bill twenty-five dollars on application and fifteen dollars on issue of license. By the Sturgis Act, the Medical Faculty may even revoke, for cause, the charter of any medical college within the State.

The Sturgis Act appears to present the advantages of being more simple, more easily administered, and more just.

We do not understand why, as provided for in the Wey bill, the graduates of the schools of New York State should be exempt from examination, when it is well known that some of them are quite indifferent as to their conditions of graduation as compared with some in other States? It is true the Wey Act provides for a supervision of the examinations by these schools, but such supervision implies an interference with the internal arrangements of colleges which is likely to be resented and to lead to misunderstandings. It is better that the State Board should be in every way independent of the colleges. As it is through the medical schools, after all, that the qualifications of the candidates are to be secured, and as it is evident that the granting of degrees under proper conditions fosters a higher education, it is but right that every candidate for the State license should possess a diploma from a legally chartered institution, which is not essential in the Wey bill.

We believe that some provision looking to the preliminary education of the candidate before beginning the study of medicine, such as is required by the British Medical Council, which is now the registering body of Great Britain, would tend to accomplish more satisfactory results than a supervision of the college examinations.

It will be noted that the organization of the so-called medical faculty calls for nine members in each bill; the Sturgis bill dividing them among three systems, by which we presume are meant legitimate medicine, homœopathy, and eclecticism. The Wey bill calls for the same number, but does not specify the composition of the faculty. As this

is a question which must be met sooner or later, it may as well be met at the outset, and we think it an objection to the Sturgis bill that it does not specify more precisely what is meant by its systems.

The title adopted by both Acts for the examining boards—"The Medical Faculty of the University of the State of New York"—seems objectionable. The term "medical faculty" has so long been applied to a teaching body, that we think it must give rise to confusion. The Medical Council of the State of New York, or the Examining Board of the State of New York, would be more explicit. The practice in some of the States of characterizing these boards as State Boards of Health, or of making such regulations a part of the duty of Boards of Health, we deem of doubtful propriety.

THE disciples of the New Code are already experiencing the difficulty of keeping their recently sought friends within control. The New York State Homœopathic Society, instead of immediately disbanding and falling into the proffered embrace of the other State Society, as was confidently predicted it would when the New Code was adopted, has the ingratitude not only to maintain its name and organization for all they are worth, but also, at its annual meeting, held at Albany last week, it has adopted a memorial expressing its disapproval of the medical bills presented at the late meeting of the New York State Medical Society, and now before the Legislature, and demanding that any board of examiners which may be authorized by legal enactment shall be composed of "three allopaths, three homœopaths, and three eclectics."

Having received the unsolicited indorsement of the New York State Medical Society, it is not unnatural that its substantial fruits should now be demanded by these irregulars; and if the New York State Medical Society is not ready, in the bills now pending, to concede to all "legally qualified practitioners of medicine" the equal standing which their State laws give them, then what does their New Code mean?

EVACUATION OF SPINAL ABSCESSES.

PRIOR to the introduction of antiseptic surgery, the treatment of abscess dependent upon caries and necrosis of the vertebræ was most unsatisfactory. A case was, however, now and then recorded in which recovery followed incision and drainage of the sac, this method having replaced subcutaneous opening by a valvular incision, which the accumulated experience of years had proved to be worthless. At the present day, the recognized procedure with the majority of surgeons is to open the abscess under antiseptic precautions, wash out the cavity with a germicidal agent, and provide for efficient drainage; but this operation is delayed until the abscess has steadily increased in size, or has approached the surface in one of the usual situations.

In a clinical lecture, published in *The Lancet*, December 29, 1883, DR. CHEVASSE, of Birmingham, urges, first, that the cavity of the abscess be freely opened and adequate drainage established as soon as the diagnosis is complete, or before the pus has pointed; and, secondly, that the incision be made above the crest of the ilium, with a view to furnish easy drainage at the most dependent part as the patient lies on his back. Other advantages derived from opening a psoas abscess in this locality are, that the drainage-tubes may be omitted at an early date, that the drain-hole being very near the diseased bone, the three or four inches of abscess cavity below this point become obliterated in a few days, and that the antiseptic dressings can be applied and retained in position more readily than if the opening is in the thigh. Even in old cases in which the abscess has steadily progressed and burrowed beyond the thigh, Dr. Chevasse recommends the lumbar incision in the first instance, and a subsequent opening where the pus is pointing.

The next best position to open a psoas abscess is above Poupart's ligament, by an incision similar to that made in ligating the external iliac artery. The transversalis fascia having been reached, the abscess is rendered prominent by pressure made from below, or, should this fail, a probe carried through a small opening made in the thigh where the abscess is pointing upwards under Poupart's ligament, will indicate the spot for a free incision. After the tubes have been inserted the orifice in the thigh closes. The opening in this locality, not being so dependent, affords a far less direct route for the free escape of the pus than the lumbar incision, and the tubes must be retained for a longer time.

That the views expressed by Dr. Chevasse represent the practice of the more advanced surgeons of Great Britain, is shown by the debate which followed the reading of a paper on this subject by MR. TREVES, at a recent meeting of the Royal Medical and Chirurgical Society, which may be found in the *British Medical Journal*, January 12, 1884. With the exception of Mr. R. W. Parker, who preferred opening the abscess above Poupart's ligament, the speakers were in favor of the lumbar incision as affording the shortest and most convenient route for efficient drainage. Besides the advantages already referred to, an opening in the loin admits of ready examination of the diseased vertebræ, and the removal of a loose sequestrum, if present, as happened in one of Mr. Treves's cases, or of carious bone with the gouge, as in an instance recorded by Boeckel, in 1882, in his brochure enti-

tled *Fragments de Chirurgie Antiseptique*. The latter operation is, however, rarely practicable, but it may be resorted to when the disease is circumscribed and superficial.

In addition to the lumbar incision, the speakers, including Treves, Bryant, Macnamara, and Marsh, generally favored an early operation to prevent the formation of a large collection of pus. Mr. Noble Smith alone opposed this view, since he trusted to complete mechanical fixation of the spine, through which he had seen good results. If no improvement ensued, he opened the abscess.

The antiseptic lumbar incision of spinal abscesses, which Dr. Chevasse attributes to Mr. Chiene, but which, if we do not mistake, was first done by König, is certainly based upon correct principles, and we doubt not that the future will prove its great service. To what extent the incision through the structures of the loin will add to the dangers, experience can alone answer. If, however, we base our deductions upon the antiseptic opening of pointing abscesses, the risks should not be great, as we find that of 28 cases of this nature recorded by LACHARRIÈRE in his *Thèse pour le Doctorat*, 1883, only 5 were fatal, and that 2 of these were scarcely attributable to the procedure.

INCOMPATIBILITY OF SULPHATE OF QUININE AND IODIDE OF POTASSIUM.

IN a communication to the Biological Society, M. RABUTEAU calls attention to the ill effects of iodide of potassium and sulphate of quinine, when administered together or at short intervals. These effects are, on the part of the digestive organs, anorexia, nausea, epigastric pain, colic, and sometimes vomiting; on the part of the general system, *malaise*, slowing and feebleness of the pulse, pallor, and a sense of fatigue. These results are due to the decomposition of the iodide and the liberation of free iodine. This decomposition takes place, not alone in the stomach, but goes on in the intestine also.

The same result occurs from the use of an iodide sophisticated with an iodate of potassium. Iodine is set free, and to the action of this is to be referred the local and systemic effects above mentioned.

ANAL FISTULE IN TUBERCULAR SUBJECTS.

IN a communication made to the Société de Chirurgie de Paris, and published in the *Compte Rendu Général*, January 2, 1884, M. JEANNEL gives the details of two cases of operation for anal fistule in consumptives, one being in an advanced stage, and the second in the early stage of the disease. In both the wound refused to heal, but the general condition of the patients was improved.

From a therapeutic standpoint, these cases would seem to be successes, and to dispel the widely spread fears which are entertained by the laity, as well as by the profession, in regard to surgical intervention in the class of subjects under consideration. That conflicting views are held as to the propriety of interference, is a fact well known to our readers. While some surgeons maintain that not only the local but the general condition is ameliorated, others of equal experience and reputation condemn the operation, basing their opinion upon its inherent dangers and upon the ill-effects produced upon the lungs by the suppression of a sort of natural issue. In point of fact, in some cases, the operation may prove to be both a surgical and a therapeutical success, that is to say, the wound may close, and the pulmonary symptoms improve. In other cases, the fistule refuses to cicatrize, and the pulmonary lesions may either undergo no change whatever, or be aggravated. Hence, the entire question resolves itself into one of indications. If the local suffering be slight, an operation should not be thought of; but if the local distress be considerable, it should be resorted to, even if there be little prospect of healing of the wound.

THE ANTI-VIVISECTION AGITATION.

IN the February 9th issue of the *Philadelphia Medical Times* is an editorial in favor of the American Anti-vivisection Society, which is there spoken of as devoted to the "restriction of vivisection," so-called, "within proper limits," and not its abolition. If this be so, the name of the Society is sadly wanting in definiteness. What are the proper limits, is, we presume, to be defined, of course, by a collection of sensitive ladies, some clergymen, and two or three doctors with exceptional ideas. What the most active and enthusiastic of them state in private, is that abolition is their ultimate purpose, and the fairness of their methods may be judged of by the public citation of Magendie's experiments made when anæsthetics were unknown, as arguments against the present use of animals, and as illustrations of the abuse of vivisection.

In England the restriction bill has resulted in practical abolition, and incessant efforts to pass a total abolition bill. The profession knows well what it would mean to yield to this absurdity. Suppose that we granted the present demand, where would be our future security? Could we expect a fate other than that which has fallen upon the profession in England? Years ago we offered to accept such a bill as has since been passed in Great Britain. Happily hysterical counsels prevailed, and the ladies concerned promptly refused any aid which did not concede total abolition. In England there was no real cause of complaint as to misuse of animals, but to-day, with restriction, physiologists

have to go to the continent to complete their researches, or, as is often the case, do their work in private and in defiance of a foolish law unfairly worked. Are we prepared for such a state of things?

We were invited by one of the physicians who spoke at the anti-vivisection meeting, which proved so dismal a failure as to numbers and as to any interest the speeches caused, to meet these good people in a just and generous spirit of accommodative sweetness of temper. But the very existence of such a society is a calumny. In the past, many of its members have waged a bitter war of gossiping slander on physicians of the highest class, and have not hesitated even, of late, to propagate the most absurd stories concerning institutions of medicine. For any truly valuable purpose—for any evil in relative proportion to the machinery set in motion to crush it—this society has as little reason to live as if it were organized for the suppression of cruelty to vegetables.

The hyperæsthesia of sensitiveness may come in a true sense to be perilously near to cruelty, and there is a form of conscience so morbid, as Wendell Holmes says, that it requires another conscience to prevent it from doing evil.

REVIEWS.

A HANDBOOK OF HYGIENE AND SANITARY SCIENCE. By GEORGE WILSON, M.A., M.D., F.R.S.E., Fellow of the Sanitary Institute of Great Britain, etc. With Plates. Fifth edition, enlarged and carefully revised. 12mo. pp. 512. Philadelphia: P. Blakiston, Son & Co., 1884.

WE are pleased to notice the appearance of the fifth edition of this work, which has been enlarged and carefully revised by the author. Dr. Wilson's handbook has been before the public for a number of years, and has been very favorably received not only in England, but in this country; the best evidence of this fact being the repeated demand for a new edition. The work occupies an intermediate place between such rudimentary books as the *Health Primers*, and the more elaborate treatises of the class to which Parkes's *Hygiene* and Buck's *Hygiene* belong. It is alike useful to the general public, the physician, and to those engaged in the administration of sanitary affairs.

A rapid perusal of the pages gives evidence of careful revision and an effort to bring the work up to date. In other respects this edition is a great improvement over its predecessors. The introductory chapter has been completely remodelled, the treatment of subjects more strictly belonging to the domain of social science having been omitted, and in its place has been introduced an historical sketch of sanitary science from the earliest ages to the present time.

A serious omission in former editions has been supplied by an addition to the chapter on Dwellings of a section on the sanitary inspection of dwellings.

The valuable reports of Dr. Thorne have been made use of to enrich the section on hospitals for cases of infectious diseases. There has been a demand for information upon this subject, due to a growing tendency in sanitary administration towards the adoption of the wise plan of isolating cases of infectious diseases in separate pavilions, and the suggestions here presented will prove highly serviceable.

Due prominence has been given to the subject of vital statistics, which has been enlarged upon and treated in a separate chapter. In handling the question, all abstruseness has been avoided, the object being to furnish a practical guide to those engaged in the ordinary work of compiling statistics of births, marriages, and deaths.

The last eighty-two pages of the volume are devoted to a detailed statement of the duties of medical officers of health, and to an Appendix containing official memoranda and data for the guidance of sanitary officers. Whilst referring specially to practices adopted by the Local Government Board of England, it will not be uninteresting to those engaged in similar work on this side of the Atlantic.

The volume is printed in large, clear type, and on good paper, and has the advantage of a full index and an ample table of contents. It is decidedly English in character, but this does not detract from its great excellence.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 22, 1884.

THE PRESIDENT, R. F. WEIR, M.D., IN THE CHAIR.

TRIPLE AMPUTATION OF THE LEG.

DR. A. G. GERSTER presented a man, forty-eight years of age, on whom three amputations had been performed. At the last one the patella, and both condyles of the femur, together with a portion of the old cicatrix, which was attached firmly to the posterior surface of the condyles, were removed. About a year ago the man suffered from compound fracture of the ankle-joint, which was not treated antiseptically. A phlegmon developed, and it became necessary to amputate the leg. Both of the flaps, however, sloughed. Although the amputation was treated by the open method, Dr. Gerster attributed the sloughing to the bad condition of the patient's circulation, due to habitual alcoholism. As there was no covering for the protruding extremities of the bones, and it was expected that the cicatrix would become ulcerated, amputation was performed a second time at the knee-joint by another surgeon. Most of the long anterior flap after this operation also sloughed, and the result was a large cicatrix upon the posterior aspect of the limb, closely adherent to the bone, and the final amputation already mentioned was performed. Dr. Gerster presented the patient especially on account of one pathological observation. When he had laid bare the condyles by the circular incision, he found that, instead of close union of the integument having taken place with the articular surface, a bursa mucosa existed between it and the cartilage. The amputation having been ac-

complished, Neuber's deep sutures were employed, one drainage-tube was placed in the cavity from which the patella had been removed, and only one sublimate-sawdust dressing was necessary. Four weeks after the amputation the man was able to walk on the stump, and was discharged from the hospital. The wound at the amputation was quite extensive and irregular, and he introduced about eleven sutures to bring about contact of the walls of the cavity with the patella. The lining of the bursa quadricipis was also removed.

DOUBLE BOWLEGS; MCEWEN'S OSTEOTOMY.

DR. GERSTER also presented a boy, sixteen years old, showing the result of double osteotomy, according to McEwen's method, for bowlegs. Nine weeks had elapsed since the operation, and the case progressed without any complications. The operative wounds were treated with a small pad of iodoform gauze. The distance between the internal condyles was three and a half inches before the operation, and now they touched each other. There was considerable arterial hemorrhage on one side, and he was obliged to ligate the bleeding vessel *in situ*. The limbs were placed upon simple straight splints, and allowed to remain four weeks, when the splints were removed, a silicate of soda dressing applied, and the patient allowed to walk about on crutches.

DR. LANGE said that he saw the last patient before his admission to the hospital, and so far as he remembered it was a case of genu varum, and the principal deflection was as it is now. In the course of the tibia, he thought it would have been better if an osteotomy had been done below the tuberosity of the tibia.

DR. GERSTER said that some of the deformity was due to curvature of the thighs, and his purpose was to determine whether or not it was necessary to osteotomize both femur and tibia; but finding that the osteotomy of the femur corrected the deformity, he proceeded no further. Doubtless, there was a marked curvature of the tibia also, but he considered the result as a very fair one.

DR. POORE asked if the femoral curve was the most marked of the two.

DR. GERSTER replied that the tibial curve was the most marked.

DR. POORE remarked that in genu varum the deformity is due chiefly to the tibial curve, and he supposed quite probably one difficulty in correcting it in this case was the loose condition of the ligaments, and on this account it is very difficult to correct the curvature.

DR. GERSTER remarked that he had had no difficulty in correcting the deformity after the bones were snapped.

DR. LANGE remarked that there now existed a slight degree of knock-knee, and the curvature of the tibia remained.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, February 7, 1884.

THE PRESIDENT, R. A. CLEEMANN, M.D., IN THE CHAIR.

A YEAR'S WORK IN OVARIOTOMY.

DR. WM. GOODELL read a report of his cases of ovariotomy during the past year. (See THE MEDICAL NEWS for February 16, page 178.)

DR. A. H. SMITH felt that Dr. Goodell was hardly right in saying that in England desperate cases are rejected. In his own experience, while in England recently, several cases which were very desperate, and which would have been generally rejected here, were operated upon successfully, and were ready for discharge three weeks after operation. It occurred to him that the lower average temperature had much to do with the result. The thermometer is not allowed to rise above 65° F. in the room in which the patient is kept, and in Lawson Tait's cases it rarely goes over 60°, and never up to 65°. Perhaps this has a good effect in preventing hyperpyrexia. The English ovariotomists are also very careful in details, especially in preventing hemorrhage, and use an immense number of hemostatic forceps. Ovarian cysts are remarkably common in London.

DR. B. F. DAWSON, of New York, upon invitation by the President, spoke of the English ovariotomists, and alluded to what he had himself seen while on visits to England as to very desperate cases being operated upon. His own late experience had been so good that he was inclined to attribute it, as well as the good results of the English operators, to absolute painstaking in the most trifling details, with absolute cleanliness; not simply antisepsis, but the utmost care throughout every step of the operation. Among other things, a very large number of hemostatic forceps are used to secure each bleeding point the moment that bleeding commences. His own last six cases of laparotomy, performed this winter, two of which were very desperate in their character, have been successful, and the results, he felt, were largely due to the avoidance of any preventable hemorrhage and great care throughout all stages of the operation to prevent blood or fluid from the cyst escaping into the peritoneal cavity. This care is exercised throughout the "toilet of the peritoneum," and he always uses a flat sponge, as does Mr. Wells, inside of the abdominal walls, upon the intestines while introducing the closing suture, which is removed only when it becomes necessary to do so to twist the last wires,

He always uses napkins to fold over the edges of the abdominal incision to prevent the oozing from the edges escaping into the peritoneal cavity, or soiling the operator's fingers. He also enfolds the cyst in towels as it is withdrawn from the cavity, to guard against even a trace of fluid soiling the intestines or wound. He clamps the pedicle temporarily when possible, and places a napkin under the clamp before dividing and cauterizing it. Every adhesion that shows any risk of bleeding, is cauterized as soon as it is separated, even when ligated. Douglas's pouch especially is sponged out until the sponges come away absolutely clean. In a recent very desperate case, one in which Dr. Emmett expressed his sympathy with him as to its almost certain fatality, the operation occupied two hours and forty minutes; owing to painstaking observance of the above details, and although half of the uterus was removed and adhesions were numerous, calling for many ligatures and frequent use of the cautery, yet convalescence was uncomplicated and speedy.

DR. GOODELL remarked that the quotation in his paper, to which exception had been taken, referred to Mr. Tait. It was taken from a paper read last autumn before the American Gynecological Society by Dr. Sutton, who was with Mr. Tait three months. He (Dr.

Goodell) had seen about a dozen ovariotomies in Great Britain, and only one was a difficult case, and in that the patient died. There he had seen patients refused on account of their age, while in this country they are not. He had operated successfully in patients aged respectively sixty, sixty-one, sixty-two, sixty-four, sixty-five, and sixty-seven years, and some one in this city had a successful case in a patient over eighty-three. He had once operated upon a patient seventy-six years of age, of a long-lived family. This was before the days of antisepsis, and the patient died. He believes that minute attention to details is the chief element of success.

One important point is to make the abdominal incision sufficiently large to see every adhesion as it is separated, and to ligate or secure immediately every bleeding point. This requires a courage which it took him years to attain. He always observes Spencer Wells's method of placing a flat sponge beneath the abdominal walls when introducing the closing sutures. He does not like wire, but always uses carbolated silk sutures, each eighteen inches long. After all have been placed, the ends are twisted together into one strand on either side and caught in the bite of a pressure forceps. The lips of the incision are then widely separated, and a final search is made for any oozing, leakage, or accumulation of serum. The sutures are then rapidly tied, and the wound dressed. This final toilet of the peritoneum cannot be made when wires are used. He now believes in the use of a drainage-tube, but he had hard work to bring himself to the point of accepting it, as he still looks upon the tube as a foreign body—a necessary evil. He had once seen death caused in a healthy man by the simple perforation of the peritoneum, without wound of the intestine, by a small stiletto, and this had made him fearful of the effect of the presence of a drainage-tube. But he now considered that the peritoneum in the case of an ovarian cyst has by thickening and attrition lost much of its vulnerability, and does not resent slight causes of irritation. He occasionally resorts to the actual cautery at a black heat to stop bleeding from torn adhesions, but he prefers the pressure forceps, the ligature, or the application of Monsel's solution.

He thinks there may be some truth in Dr. Smith's idea concerning the effect of the low temperature of the operating and of the convalescent room. He was struck with the absence of ill results in one operation in London, by Dr. Bantock, of which he had been a spectator. The day was cold, damp, and foggy, and the operating room was chilly, the windows being open; but the patient promptly recovered. One case of his own, in which the extreme emaciation and prostration of the patient forbade postponement, was operated upon in severe winter weather; the steam-pipes at the hospital had been frozen over night, and although they had been thawed out, the temperature of the operating room was only 54°. In this case the cyst had contained colloid matter, and had burst spontaneously; all that could possibly be removed, was scooped, sponged, and washed out. Much remained behind, yet the patient recovered and afterward became quite fat. This operation was performed three years ago, both ovaries were removed, but another tumor can now be discerned in the abdomen. The patient being fat and also quite sensitive, it is not possible to determine accurately its character, but he hopes it is a pedunculated fibroid of the uterus, and not a malignant tumor.

DR. DAWSON requested Dr. Goodell to give his opinion respecting the management of the drainage-tube, and of the importance of the spray.

DR. GOODELL said that, when operating in private houses, he has begun to dispense with the spray. Carbolic acid spray poisons some patients, and he, being afraid of it, only uses it when he does not consider it safe to omit it, as, for instance, in a general hospital, or where there are many spectators present. Year before last, he lost one patient from its use; she had contracted kidneys. Only last week in a case operated on in the Hospital of the University, the patient was profoundly affected by it and was with difficulty restored by means of digitalis, stimulants, etc. Where he omits the spray, he uses the drainage-tube more frequently. If he finds in Douglas's pouch, after the sutures have been placed and the sponges removed, two or three drachms of bloody serum, and the source of this oozing cannot be found, he inserts a drainage-tube; and he also uses it in all cases in which there has been peritonitis, or in which septic symptoms are present from a purulent cyst. Over the mouth of the tube he springs a piece of rubber sheeting, which is folded over a sponge squeezed out of a five per cent. solution of carbolic acid. The sponge is examined and squeezed out every few hours, and the tube moved slightly to clear the openings and allow any accumulation of serum to escape. As soon as a moderate amount of serum escapes without any tinge of blood, the tube is removed. This generally happens within forty-eight hours, but in one case it was necessary to allow it to remain five days. He never irrigates the abdominal cavity, but he sometimes introduces the long nozzle of a hard rubber syringe into the tube and draws out any serum that may have accumulated. When he operates in the country and leaves the patient in the hands of the family physician, he tries to avoid the use of the drainage-tube as much as possible.

DR. DAWSON had given some attention to the question of the drainage-tube. In New York two deaths had lately happened after ovariotomies, and in each case the surgeon had ascribed the fatal termination to the too early removal of the tube. Soon after these unfortunate cases he had operated, and had been obliged to use the drainage-tube; in the second and third days after the operation, the serum exuding from the tube was bloody. On the fourth day it was pure serum. The patient was doing well, and Dr. Dawson concluded to leave well enough alone, and, with the result in the two other cases before him, allowed the tube to remain. He used a wire with a pledget of absorbent cotton attached to the extremity, to soak out the accumulated serum, and continued to use fresh pieces until they came away clean. The tube was evidently being walled in by a deposit of lymph around it. On the sixth day, after finding very little serum, the last pledget of cotton brought away a little yellow spot that might have been either lymph or pus. That night he discovered another trace of the same appearance, and the microscope showed it to be pus. The next day the discharge was fetid. A saltspoonful of iodoform was put into the tube every time it was cleaned, and on the tenth day it was removed and a roll of absorbent cotton saturated with

iodoform was put in its place. This was replaced in a few hours with another until all signs of pus ceased. The opening closed in forty-eight hours. The patient recovered. He would like to ask if Dr. Goodell had ever regretted removing a drainage-tube too early? Is a drainage-tube more of a foreign body on the third or fourth day than it is on the first?

DR. W. H. PARISH had recently performed abdominal section for the removal of a fibroma of the uterus. In this case he used a drainage-tube, although he was not able to pass it down into Douglas's pouch. On the third day, he noticed that the serum escaping from the tube was cloudy and had a slight odor. On the fourth day, the odor was quite objectionable, and as the tube had evidently become separated from the abdominal cavity by the formation of a canal of lymph around it, resembling in appearance diphtheritic membrane, he decided to withdraw the tube. He washed out the canal with a two per cent. solution of carbolic acid. The canal soon closed and there was no return of the offensive odor.

DR. GOODELL could not recall the loss of a case after the removal of a drainage-tube. He has had, however, a number of deaths while the tube was still in position, but that meant simply that the cases were complicated and difficult ones. Was not the tube itself the cause of the pus in Dr. Dawson's case? Air containing germs was, of course, admitted into the tube in the cleaning-out process, and these germs would cause decomposition of the lymph. Might not also the tube, acting as an irritating foreign body, cause pus? He introduces a stitch in such a manner, beyond the drainage-tube, as to make tension of the skin around the tube, and this closes the opening as soon as the tube is withdrawn. He has occasionally followed the removal of the glass tube by the introduction of a rubber one of smaller calibre, but he has discontinued this practice believing the glass tube to be the least irritating.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, February 18, 1884.

THE PRESIDENT, WILLIAM DETMOLD, M.D., IN THE CHAIR.

A paper was read by DR. E. G. JANEWAY on

THE ETIOLOGY OF TYPHOID FEVER.

(See page 212.)

At the conclusion of the paper, Dr. Janeway said that he had intended, had time permitted, to make some inquiries in regard to the danger of contracting typhoid fever from water more or less contaminated with sewage; he had intended to institute more inquiries, similar to those which had been made on the Thames, concerning the relative prevalence of the disease in the cities of Troy and Albany. The sewers of Troy all emptied into the Hudson, and Albany, which was situated six miles lower down, derived its water-supply from the river after this sewage had been poured into it. In England it seemed to have been demonstrated that water which was contaminated with sewage, even to the amount of one to twenty, became innocuous after flowing twelve miles. The explanation generally accepted was that during this passage the organic matter became oxidized; but if it was assumed that typhoid had a special bacillus, the failure of the water to convey the contagium of this disease would probably be explained that the bacilli have all been absorbed or destroyed by other organisms in the transit.

DR. AUSTIN FLINT, SR., thought that all must agree that the subject of the paper was one of great importance, as well as interest, and that it was most judicious to bring it before the Association at this time. At the present time it was universally admitted that preventive was of greater importance than therapeutic treatment, and typhoid fever was beyond doubt a preventable disease. Our ability to prevent it would, of course, depend upon our knowledge of its etiology. He had listened with great interest to the paper, and he agreed in the main with the writer in his conclusions.

There were certain points in regard to typhoid fever which were of great practical interest. In the first place, it apparently depended on a special cause, a cause which was capable of producing this particular disease and no other, just as the various eruptive fevers depended each on a special cause. Whether the disease was due to a specific germ or not, had not as yet been proved, but reasoning from analogy, it seemed altogether probable that it did depend on a microscopic organism, and in due time he did not doubt that it would be demonstrated beyond question. In the second place, was this special cause always derived from the body of a patient suffering from the disease, or could it spontaneously arise under certain conditions? He did not think that he was prepared to say positively that the first proposition was true; but, reasoning again from analogy, we could infer that the germ, which, for convenience, at all events, it might be called, always did originate from the body of a typhoid fever patient. It was by no means always possible to trace the origin of the disease in any given case, but neither was this always possible in diseases which were recognized by all as contagious, such as smallpox and scarlet fever.

In the third place, this special cause had been shown to be capable of preserving its activity for a very considerable period—at least two years. Again, it seemed to be well established that the germ was introduced into the system in two ways: first, through drinking-water, or other liquids diluted with water; and, second, by the inspiration of contaminated air. In this locality it was probable that, as a rule, it found an entrance by means of contaminated air. The Croton water came from a long distance, and in itself was practically free from the danger of typhoid pollution. The invasion of the disease could generally be traced to some defect in sewage, and this was why it ought to be prevented. Typhoid fever seemed to be increasing in New York, and this he thought was due in part to the present deficient water supply, as well as to the defective sanitary provisions seen in many houses. Under the circumstances, we could only wonder that the disease was not more prevalent than it was.

In every case of typhoid fever to which he was called, the physician should ask himself, What is the cause of this? and insist on making a thorough examination for the purpose of finding it out. In almost every instance the cause could be found, and he thought that it was the duty of the Board of Health to institute such an investigation in every case reported to them. Since in

this way some local cause could almost invariably be discovered, a great deal might thus be accomplished in the way of prevention. In regard to typho-malarial fever, he found himself a little at variance with the author of the paper. He thought that this was a good rule which ought to be preserved, and that we frequently had seen in New York the combination of the typhoid germ with a malarial element. Dr. Janeway looked at the matter from an anatomical standpoint, but he viewed it from a clinical standpoint. He admitted that the typhoid lesions were found after death, and admitted that in certain malarious districts a large number of cases of fever were sometimes classed as remittent which were in reality cases of typhoid fever, because the latter distease had before been almost unknown in the region. But, at the same time, there was a class of cases which were better designated under the name of typho-malarial than any other. This was comparatively a recent term, but many years ago the distinguished Dr. Drake, in his work on the diseases of the Mississippi Valley, had described the same thing, or a very similar one, viz., malario-typhus.

DR. HOCHHEIMER said that, as Dr. Flint had expressed the opinion that the Board of Health should make a thorough investigation as to the cause in every case of typhoid fever reported to them, he was very glad to be able to say that the Board had already been doing this all through the past season, and as he had been one of the sanitary officers employed in this work, he had acquired a very considerable experience with the disease, and had been enabled to obtain a number of facts in regard to its present character in New York which perhaps might prove of interest to those present. He had studied it not in a limited locality or in an institution, but as it existed in private families in various parts of the city, and he had found it marked by a number of peculiar features.

The question of typho-malarial fever was one that came up frequently, and in endeavoring to trace back the cause to which this designation was applied by the attending physician, it was found that in a great many instances there had been three or four cases of fever in the same family. The first case was often comparatively mild, and it being taken for granted that it was malarial in character, not infrequently no physician was called in. It lasted pretty constantly for about four weeks, however, and was characterized by many of the symptoms of typhoid fever. When the second case became developed the physician was sure to be summoned. At first he was very likely to pronounce it malarial fever; but when by the second or third week distinctively typhoid symptoms had made their appearance, in order protect his former diagnosis, he would perhaps say that the disease had turned into typhoid, and would call the case one of typho-malarial fever.

The disease, as lately seen in New York, was very different from the typical typhoid fever described in the text-books. In nine-tenths of the cases not half of the ordinary characteristic symptoms of the affection appeared. As to the sanitary conditions and the proximate cause, the fact was very noticeable that the central portion of the city, say from Sixth Avenue to Lexington Avenue, was almost entirely exempt from the disease; and when cases did occur in this district, they could almost invariably be traced to a source of origin outside of the city. The great mass of the cases was met with along the rivers, both on the east and west side of town. Whether the emptying of the sewers into the rivers had anything to do with this, he was unable to say; but, aside from this, in almost every single instance, some sufficient local cause for the disease could be found. In this connection, it was a point of practical importance to note that no case of typhoid fever occurred in a house where the school-sink was employed, except in one or two instances where the apparatus had been allowed to become filthy or was out of repair. When it occurred on premises with privy-vaults, it was found that either the vault was not ventilated or the ventilating pipe had leaks in it. Sometimes, also, cases were found on the fourth floor of houses where the ventilating pipes were carried to the roofs of rear houses, and just on a level with the fourth floor of the houses in front. When the disease was met with in houses provided with water-closets, it was generally seen on the upper floors, where the water supply was most imperfect and irregular.

As to the age of the patients, the youngest child that he had seen with the fever was twenty-two months old, and, as a rule, it never occurred in young children unless they had been exposed to the danger of infection for a considerable time. By far the largest number of cases was found in those between the ages of twelve and forty; while between those of forty and sixty there seemed to be a remarkable immunity from it. Persons beyond the age of sixty, however, were very frequently attacked. There was one important question on which he thought it was desirable that some light should be thrown. It was taken for granted that the disease could be propagated only by a special cause derived from those suffering from it, and yet was not contagious. He should like to know whether it was possible for it to be conveyed by anything else than the dejecta of a patient.

DR. JANEWAY, in closing the discussion, remarked that while clinically there might be some ground for retaining the word typho-malarial, he thought the use of the term productive of harm, because it tended to keep both physicians and patients from taking proper precautions in regard to the disposal of the dejecta, which was a vital point in the prevention of the spread of the disease. On this account, therefore, as well as from the anatomical basis, he objected to the name, and thought that in cases in which such a designation seemed appropriate from the clinical characteristics, it was better simply to call the disease typhoid fever with a malarial complication. As the term was now commonly used, some physicians seemed to understand by it a disease which was neither typhoid fever nor malaria, but a vague and indefinite sort of an affection with some of the characteristics of each; and as long as the autopsies showed almost invariably the characteristic lesions of typhoid fever, he thought it very unfortunate that such loose ideas should prevail in regard to the matter.

CORRESPONDENCE.

"A YEAR'S WORK IN OVARIOTOMY."

To the Editor of THE MEDICAL NEWS.

SIR: Under the above heading there appears in THE MEDICAL NEWS of February 16, 1884, an article from the pen of my esteemed friend, Professor William Goodell.

In this article he misquotes me (of course, unintentionally) in the following sentence: "Whilst a very distinguished and successful British ovariotomist does not remove very large tumors—those which may weigh from sixty to sixty-five pounds—with extensive adhesions," etc. The word "very" is a mistake. I said, "does not remove *many* large tumors," etc. However, I am not aware that this British ovariotomist ever refuses to remove a tumor because it is large. In three months I spent with him (Mr. Lawson Tait), he removed but one large ovarian tumor; but he twice did hysterectomy with fibroids weighing thirty-eight and forty pounds respectively; during this time he was constantly removing the ovaries and tubes, frequently operating twice a day. One of the above hysterectomies, after which the patient recovered, was refused by Sir Spencer Wells. Very few operators get a long line of the same sort of cases, but Mr. Tait has the longest line of ovary and tube cases, and the shortest line of big ovarian cysts, of any man I visited in Europe.

In regard to the paper my criticism is offered in all kindness and with no desire to find fault. Taking into consideration that eleven of his twenty-five cases were done in a general hospital, and ten at their own homes, his results are simply excellent, considering the circumstances under which he operated. But out of the eleven cases done in the general hospital only one died, while of the ten done at home five died. Here is a chance to draw a conclusion that "home" for ovariotomy is worse than "general hospital." In his private hospital four cases were done with three recoveries.

This fact in regard to "home" as a place for ovariotomy is just about up to my own notions. If I had my choice between home and a general hospital as good as that of the University, I would take the hospital, but there are very few such hospitals in this country, and this one is not yet old enough to do its worst in abdominal operations. Several things have struck me as certain in regard to ovariotomy and its statistics in this country. One is that so long as the operation is done by ones and twos over the land, in homes and general hospitals, very little progress in good statistics will be made. Another is, *that when we follow the example of Keith and Tait, and prefer private hospitals, free from all general surgery and all diseases, in which to do our operations;* and when the cases are sent to a comparatively few operators thus engaged (keeping entirely out of general practice and pathological work), *we shall get just as good statistics as Keith or Tait show, and our climate will be relieved of a bad name.* Ovariotomies are usually poor pay cases; but no matter, some better results than some of us can show must be gotten or else *we ought to stop operating.* Last summer I lost every case I cut. (See *Medical and Surgical Reporter*, Feb. 2, 1884.) I was just as careful as I possibly could be under the circumstances. I changed the circumstances to a *private hospital on high ground, excluded all spectators* (*save those interested*), and, as a result, *every case I have cut since* has recovered *without a bad symptom,* and this remark applies also to a case done two weeks ago (*now well*), in which I removed the ovaries, tubes, and uterus above the vaginal attachment.

Yours respectfully,

R. S. SUTTON, M.D.

PITTSBURG, PA., February 18, 1884.

HYPOSULPHITE OF SODA AND CARBOLIC ACID IN SEVERE CONTUSIONS.

To the Editor of THE MEDICAL NEWS.

SIR: In 1869, I was summond to see Frank Reeder, a laborer in a saw-mill, who had received a severe injury by a log carriage, weighing about three or four thousand pounds, falling on his wrist and hand, which were very badly lacerated, the belly of the flexor pollicis protruding through a slit in the skin about the size of a large nutmeg. He was suffering great agony. No bones were fractured. I used cold water dressing, and gave him one-fourth of a grain doses of morphia, without affording him ease. On the second day he was no better; fearing that gangrene would set in, I ordered the following mixture:

℞.—Sodæ hyposulphit., . . . ℥iv.
Acid. carbolic. crys., . . ℥ss.
Glycerinæ, ... ℥ij.
Aquæ, ... Cj.—M.

Sig.—To be used as a lotion, and to keep a cloth on the wrist and hand well saturated all the time.

In half an hour after using it, he was completely relieved, and passed a good night without any narcotic, and from this time he went on favorably without any trouble whatever, and in six weeks had full use of his hand.

In 1870, I was called to see a lad, about eight years old, with oblique fracture of the humerus above the condyles; it was almost a compound fracture, the point of the humerus coming so near the surface, that it caused a blood-blister to be seen under the cuticle. He complained a good deal, and as I disliked to use narcotics in one so young, I gave a prescription for the same lotion, and it had just as happy an effect in this case as in the previous one.

As I live in a town where there are about fifteen hundred men, who gain their livelihood by working in saw-mills and lumber, there is scarcely a day in which I do not use this lotion, and have never been disappointed in its effects. I could give you case after case, but it would be mere repetition, so I think it useless.

I have used it in erysipelas, and in the eruptions caused by *Rhus tox.* and the poison ivy, with good effect.

D. C. HEWSON, M.D.

ORANGE, TEXAS, January 26, 1884.

THE OFFICE OF ASSISTANT SURGEON-GENERAL.

To the Editor of THE MEDICAL NEWS.

SIR: On January 29, 1884, a bill (S. 1307) was introduced by Mr. Logan, to abolish the office of Assistant Surgeon-General of the Army. With perhaps one exception, the passage of this bill would affect, more or less, the status and promotion of the officers of the Medical Corps of the Army, and it should, therefore, be of sufficient interest to the medical profession at large to make at least some effort to prevent its passage.

In 1874, thanks to the efforts of the medical press and societies, the condition of the Medical Corps was much improved by adding a number of Colonels and Lieutenant-Colonels to the department, and it is believed

that the same feelings and views which existed at that time still prevail throughout the country. The prospects of Medical Officers of the Army are by no means too brilliant, and to limit promotion by abolishing the grade of Assistant Surgeon-General seems unjust.

It is claimed that the office is useless, and confers but an empty honor upon the incumbent. But how is it that the late General Crane held the office for almost sixteen years, and who will deny that he did not fill the position with credit to himself and to his country? If there was work, and good, honorable and useful work to be done for one of the most faithful officers the Medical Department of the Army ever had, the same work must still remain, and the claim that the office is useless is not well taken. It may be true that the position confers but an empty honor upon the incumbent, but there are, no doubt, some medical officers who have grown gray in the Army who would be proud to bear that empty title as a slight recognition of the value of the services they have rendered to the Union. If the Assistant Surgeon-General is not now required at the seat of the Government, why not give him control of the medical affairs of the division commanded by the senior General officer? But do not abolish the office. Give it to one of those men who helped to carry civilization to the far west before some of us were born, and who administered to our wants, and those of our fathers, on many a bloody battlefield of the war of the Rebellion.

Foreign countries honor eminent men of the medical profession by conferring upon them medals, orders, knighthood, and nobility. We have nothing else to give them than that highest of all gratitudes, the thanks of the Republic, and for military surgeons, possibly that more substantial recognition, increased rank and pay.

What are a good many of our higher military positions, in time of peace, but empty titles? But who would think of abolishing these offices without crippling the military establishment, of which the Medical Department is undoubtedly a most important branch.

Yours respectfully,

CADUCEUS.

NEW INVENTIONS.

THE UVULATOME.

BY ROBERT W. KNOX, M. D.,
OF RICHMOND, TEXAS.

CLIPPING the uvula is one of the most common and simple of minor operations. Nevertheless, every practitioner encounters some difficulty in avoiding spasm, seizing the elongated organ, and severing it at the desired point. Indeed, with the ordinary methods, the uvula is usually clipped while in motion, and consequently it often occurs that the muscular substance is divided when the elongation is due, *not* to hypertrophy, but to the exuberant mucous membrane. When cut in this way, with scissors and forceps, the stump will be longer on one side than the other.

In order to avoid this last-named condition, and to facilitate the performance of the operation, I have devised the instrument here delineated. The handles are made long and curve upward when in position, thus facilitating an easy view of the throat. The special claim for the instrument is in the receiver beneath each blade, which is so arranged that one passes within the other, and thus all interference with the blades is avoided. No portion of the uvula or soft palate need be touched, except at *the very instant* of excision. No tenaculum or forceps is necessary, the severed portion of the organ being caught and retained by the instrument. The instrument is so simple, acting like an ordinary pair of scissors, that it is free from the uncertainty of the complicated uvulatome made after the plan of Physick's tonsillotome.

In addition to my own satisfactory experience with the instrument, it has elicited the approval and commendation of my friend, Prof. Dudley S. Reynolds, of Louisville, Ky., whose wide experience in laryngology entitles his expressions to special consideration.

This uvulatome was manufactured for me by Messrs. Tiemann & Co., of New York.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

CINCINNATI HOSPITAL.—The examination of candidates for the position of Interne to the Cincinnati Hospital, resulted in the appointment of Messrs. A. B. Phelps, J. Maloney, and F. W. Hendley, of the Medical College of Ohio; Messrs. R. Rover, B. J. Magee, and J. C. Oliver, of the Miami.

OHIO MEDICAL COLLEGE.—The annual contest for the prizes offered by Prof. W. W. Dawson, of the Ohio Medical College, occurred at the Good Samaritan Hospital a little more than a week ago. Prof. Dawson gives, each year, three prizes: one for the most expert bandaging, one for the best dissection, and one for the best anatomical drawing. The names of the successful contestants are withheld until the evening of the Commencement.

NATURE AND CAUSES OF CHOLERA.—A cablegram from Berlin, dated February 19, states that the German Sanitary Commission which was sent out to Egypt by the Imperial Board of Health to study the nature and causes, etc., of cholera, and which, after finishing its labors at Alexandria, was ordered to continue its investigations in India, has just forwarded a report from Calcutta, where it arrived some two or three months ago. The Commission discovered the cholera germ in a water-tank at Calcutta, and found in the suburban village, where the cholera appeared, the same microscopic organism which had been discovered in the lower intestines of cholera victims in Egypt.

YELLOW FEVER AT HAVANA.—Sanitary Inspector Burgess reports six deaths from yellow fever at Havana for the week ending February 9, 1884. He inspected

nineteen vessels during the week bound to United States ports, and disinfected those which had loaded at suspicious wharves.

MARINE HOSPITALS AT STATEN ISLAND AND MEMPHIS.—Mr. James, of New York, introduced a bill into the House last week, for the purchase of property for establishing a Marine Hospital on Staten Island, and Mr. Young, of Tennessee, for the completion of the Marine Hospital building at Memphis.

MEXICO WAKING UP.—It will be seen by the following action of the National Hygienic Congress, in session last November, as reported by Assistant Surgeon Main, that Mexico is falling into line, and now proposes to do something towards guarding her coast against imported diseases by establishing rigid quarantines, a measure always heretofore opposed by that country:

The Third Commission of the National Hygienic Congress has presented an extensive *Dictamen*, the result of which is to provide for the establishment of lazarettoes in the Republic. The document contains the following propositions:

1st. Quarantine stations to be established and built in all ports, for coasters and vessels of the high seas in the Republic,

2d. In the ports where it is possible to do so, the lazaretto shall be constructed upon an island; if not possible, it shall be on the mainland, at least two kilometres distant from any population, and in a contrary direction to the prevailing winds with respect to the port.

3d. But in its construction the following conditions should be observed:

a. To be built upon a vegetable soil, when practicable, beneath which may be found an impermeable subsoil, and with sufficient declivity to facilitate drainage.

b. It should not be near a mountain ridge or other eminence that may in any degree impede the free circulation of the prevailing winds.

c. It should have at its undisputed disposition a sufficient supply of living and potable water.

4th. Each lazaretto shall consist of three departments; one for the sick, one for observation, and one for baggage and merchandise; and each one with its correspondent servants and employes.

5th. These departments should have the following conditions:

a. Proportionate capacity to avoid agglomeration.

b. Convenient orientation, locality considered; and so disposed and planned as to reap the richest benefits of the prevailing currents.

c. The distance between each department shall be at least two hundred metres; and the department of observation shall be first to receive the wind, by its relative situation, respecting the other departments.

d. The perfect non-communication between the three, and with the port.

e. The department for the sick is to be a model of St. Elol Hospital, of Montpelier, as nearly as may be in all respects.

6th. Persons in apparent health are not to be detained at Vera Cruz in the wards of observation, but are permitted to go at once to Oriyaba, and there suffer quarantine before going farther into the interior, unless it is desired to return immediately to the coast.

7th. This discipline is to be respected in other ports and infected places, provided the topographic conditions and means of communication permit it.

8th. All persons coming from places where cholera, smallpox, yellow fever, or pest, or any other infectious diseases exist, shall be submitted to the lazaretto regulation.

SURGEON-GENERAL HAMILTON BEFORE THE PUBLIC HEALTH COMMITTEE OF THE HOUSE.—Surgeon-General Hamilton, of the Marine-Hospital Service, by invitation, appeared before the House Committee on Public Health on Thursday, the 14th inst., to answer certain charges preferred against him by Colonel Waring, Secretary of the National Board of Health, viz., that he "he had been unskilful, injudicious, and unsuccessful in his quarantine work," and that "in his efforts to control public and official opinion he had been guilty of misrepresentation." To refute the first charge Dr. Hamilton read a letter from the Board asking him to give them the benefit of his experience in quarantine work, and such suggestions as to the course to be taken by the Board in carrying out the law; to examine the blanks and forms now in use by the Board; and to obtain such aid, counsel, and assistance as he might be disposed to furnish the Board. He produced another letter from the Board showing that their original regulations for the management of quarantine, which President Hayes failed to sign because so unskilfully drawn, were amended in accordance with his suggestions, and after passing through his hands were signed by the President. He then denied that he had made misrepresentations in seeking to control public opinion. He stated that the President of the National Board of Health had written a letter to Speaker Carlisle setting forth at length his grievances against the Marine-Hospital Service, and requesting the appointment of the persons he named as members of the Committee on Public Health. Dr. Cabell, who was present, stated that he had asked Mr. Carlisle to place men on the Committee who would attend the meetings and who took an interest in health matters, and that at the request of Mr. Carlisle he had put his application in writing, but disclaimed any intention of packing the Committee.

Several members of the Committee spoke upon the subject, Mr. Davis, of Mass., saying that he had been approached by Dr. Cabell at the Riggs House, who, finding he had served on the Massachusetts Board, said he would be a proper person to be placed on the Public Health Committee, and asked him if he would serve. He answered declining; he was then asked, if appointed, would he serve, and that he told Dr. Cabell he hardly thought he would decline if the Speaker appointed him, but that if the Committee now saw fit he would tender his resignation. Dr. Hamilton said he did not believe the Committee had been packed, but he wanted to show the attempt had been made. He said, however, that Dr. Smart, Secretary of the Board, had packed the Public Health Association, at Indianapolis, and produced the circular letter addressed by Dr. Smart to members of that Association. He characterized these plans of the Board as "injudicious."

Dr. Hamilton defended the quarantine management by the Marine-Hospital Service, and produced affidavits and statements from citizens in various towns of Texas,

together with a letter from the Governor, approving the work. He then spoke of the management at Pensacola by the National Board, through its protégé the old Pensacola Board, and stated that the latter had been presented for negligence and maladministration by the Grand Jury. Also, that the National Board approved a requisition for $2000 from Pensacola after the epidemic had disappeared, which money was divided up among friends of the Board. If not dishonest, this was at least "injudicious." The sinking of several vessels of the "Mississippi fleet" by the nautical member of the Board, was characterized as "unskilful." He then laid the responsibility of the Pensacola epidemic of 1882 at the door of the Board, who through its protégé let the disease into that city. He showed that Colonel Waring, its present Secretary, had been employed by the Board to investigate and write essays on sewer-traps, etc., at the time that gentleman held patents on that very subject, reading a list of said patents to the Committee. He considered this "injudicious." He showed that Dr. Verdi, a member of the Board, had been paid $300 for an eight and a half page essay, three and a half pages of which were made up of an editorial taken from the London *Times*, and figures from the Bureau of Statistics —also "injudicious." There was much more of the same sort of material brought forward by Dr. Hamilton which our limited space will not permit us to give, and he informed the Committee at its adjournment that he was not nearly through. He has been invited to continue his argument at its next meeting.

ARMY MEDICAL OFFICERS.—A bill was reported favorably last Tuesday by Senator Logan from the Committee on Military Affairs, to define the title and duties of certain officers of the Medical Department of the Army. It provides that that department shall have two grades of officers, one grade to be known as assistant surgeons-general with the rank, pay, and emoluments of colonel, and another, to be known as deputy surgeons-general, with the rank, pay, and emoluments of lieutenant-colonel.

TO COMPENSATE AN ARMY SURGEON.—The Senate last Tuesday passed a bill to compensate Dr. Edward P. Vollum, Surgeon, United States Army, in the sum of seven hundred dollars for loss of personal effects by wreck, in 1856, of a vessel on which he shipped as a passenger under detail from the Secretary of War.

VIVISECTION IN GERMANY.—At the request of the Minister of Public Instruction, the Medical Faculty of Berlin has recently given the following opinion as to the necessity of vivisection: That vivisection is necessary for investigation and instruction, and that without it no further advance in physiology is possible; nor can that opinion and judgment be acquired by the students which is only to be arrived at by an insight into the performance of the important functions of life. Furthermore, a series of experiments on animals is necessary and indispensable for medical instruction if the laws of nerve-conduction, digestion, circulation, etc., are to be effectively understood; and their comprehension by the physician is necessary to enable him to check hemorrhage, or perform any other operation which is necessary for the restoration of health. But especially, in later years, does the science of medicine owe to experiments on animals much of the light thrown on the causes of human disease, as well as upon the means for preventing them. The proper disposal and disinfection of excrementitious matters would also be impossible without these experiments. Experiments on animals are therefore of enormous importance and great value for the State and society, as well as for science.

To this paper are signed the names of Du Bois-Reymond, Virchow, Westphal, Liebreich, and other distinguished scientists.

THE PROPOSED NATIONAL PHARMACOPŒIA.—*The Journal of the American Medical Association* says of the bill recently introduced into Congress for the publication of a *National Pharmacopœia*, that "the method of supervision and preparation provided in the bill secures as much freedom from local and partisan influences, and imparts to it as much of a truly national character, as is possible, while the publication by the government removes it entirely from the field of financial strife or competition. We hope individual members of the profession in every State will use what influence they have with their representatives in Congress, promptly, in favor of the passage of the bill."

THE INTERNATIONAL HEALTH EXHIBITION.—The outline of the International Health Exhibition, to be held in London this year, includes six groups, and extends to sanitary appliances for schools, workshops, dwellings, food, dress, and in all to about sixty classes in detail. There will be held with it an International Congress on Health and Education. The Hygienic Exhibit at Berlin last year was visited by nearly a million of people, and proved a financial success, notwithstanding the fire which consumed the first building.

NEW JERSEY STATE BOARD OF HEALTH REPORT.—The seventh annual report of the New Jersey State Board of Health has valuable articles on "School Hygiene," "The Protection of Schools from Contagious Diseases," on "Health Resorts," "Kerosene," "Malt Beverages," "Milk," "The Care of Homes," and on "Modes and Places of Interment." A list of all physicians who have registered under the law of 1880 and its supplements, shows about 1800 practitioners in the State, with all forms of diplomas, certificates, and licenses.

THE SEWERAGE SYSTEM OF BOSTON, as recently completed, was first outlined in 1875, and has been chiefly executed by J. P. Davis, C. E., and his engineering staff. The plan is that of intercepting sewers and pumpage. The pumping station is at Old Harbor Point, and Dorchester Bay is crossed by a tunnel. The whole is constructed after the most careful details, and Boston will no doubt be greatly benefited by a system, the guiding formula of which is, "The sewage shall pass in a continuous current from the houses until it reaches its destination in deep waters far away."

FOOT AND MOUTH DISEASE is very prevalent in Great Britain. The whole number of animals attacked for the year ending December 31st, is given by Fleming's *Veterinary Journal* at about 440,000. The disease has arrived here two or three times by importation, and once within a year at Philadelphia, but was quickly

recognized and isolated. We have recently seen two animals inoculated with the disease for experimental purposes.

GLANDERS has again broken out in the South Orange car stables, near Newark, N. J., although the State has a special law requiring the destruction of diseased horses, and over sixty in this stable have been killed.

GASTROSTOMY IN THE SEVENTEENTH CENTURY.—MR. JAMES DIXON, in a communication to the *Medical Times and Gazette*, February 2, 1884, states that on July 9, 1635, Daniel Schwaben opened the stomach of a male and removed a knife which he had swallowed. No attempt was made to close the wound in the organ, which is described as spontaneously shrinking together. The external wound was closed by five sutures, and a poultice was applied. Soup was taken by the mouth on the day of the operation, and a powder administered. The patient recovered and lived several years.

DR. WEIR MITCHELL is the author of a story now appearing in *The Atlantic Monthly*, which has a medical interest.

A RECEPTION TO DR. PARVIN.—The Alumni of the Jefferson Medical College gave recently a reception to Prof. Theophilus Parvin, at the St. George Hotel, Philadelphia.

"THE DWELLINGS OF THE INDUSTRIAL CLASSES IN LIVERPOOL," "The Rehousing of Outcast Glasgow," and "The Homes of the Poor in Dublin," are subjects of valuable papers in the *Sanitary Record*, by Drs. Forwood, Stoddard, and Cameron. They show what wonderful sanitary and moral blessings have resulted from the removal of whole streets of rookeries, and from the model lodging-places and other tenements.

VITAL STATISTICS OF PARIS.—The quarterly summary of the Bureau of Vital Statistics of Paris, for the quarter ending December 31, 1883, shows the work done by the Night Medical Service during that time. The total number of patients receiving medical attention was 1773, and the average number of visits per night was 1937. Of the patients, 34 per cent. were men, 51 per cent. women, and 15 per cent. children under 3 years of age. Among the patients visited were 226 cases of labor; diseases of the respiratory system, 264 cases; diseases of the digestive system, 148 cases; diseases of the nervous system, 333; accidents, 149. Among the number, 50 were reported dead before arrival of the physician.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending February 9, 1884, indicate that typhoid fever, tonsillitis, intermittent fever, diarrhœa, and measles have increased, and that remittent fever, erysipelas, and inflammation of the bowels have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending February 9, and since, at ten places, scarlet fever at fourteen places, and measles at ten places. One case of smallpox was reported in Bath Township, Clinton County, February 10.

NOTES AND QUERIES.

THE ENDORSERS OF THE NEW CODE.

To the Editor of THE MEDICAL NEWS.

SIR: In the last number of your Journal, it is stated editorially that "Dr. Roosa is reported to have said that letters had been received from the best men of many States, urging New York State to stand firm in shaking off the shackles of the so-called National Association, and promising that other Societies would follow the example."

A regret is then expressed that Dr. Roosa did not read those letters, and you also state that the *Record* had not been willing to produce letters which its editor had received, endorsing its course "in its advocacy of freedom in consultations," but the hope is expressed that the letters to which Dr. Roosa referred "may not share this sad fate," but "yet see the light of day."

In answer to all this, or to that part of it which concerns me, I beg that you will allow me to say: *First.* That for this time I am reported by THE NEWS with entire correctness, both as to letter and spirit. *Second.* The letters to which I alluded, cannot be produced and published at the call of THE NEWS, because they are private letters. In my opinion, to publish them would be to violate a code which I hold very dear; the unwritten code that obtains among gentlemen. *Third.* To publish these letters would be to invite for the writers the same kind of attacks upon their integrity and motives, that have been so persistently made upon those who have "thrown off the shackles" of the Judicial Council of the American Medical Association.

When the writers of those letters are ready to face the persecuting spirit which dropped the name of Alfred C. Post from the roll of the American Surgical Society, and which in New York City impotently threatened to boycott and ostracize the opponents of the Old Code, they will, undoubtedly, write and speak to the profession at large. Although I must decline to furnish you with the names of those who have written the letters for which you ask, I will say that the writers of them are prominent medical men in the States of Maine, New Hampshire, Connecticut, Massachusetts, Rhode Island, Pennsylvania, Virginia, Ohio, Missouri, North Carolina, and California. It also gives me much pleasure to inform you that I have indirect but reliable assurances from several well-known physicians in Philadelphia, that they will, in due time, endeavor to induce the profession in that city to shake off the *Old Code.*

I am, sir, yours very respectfully,
D. B. ST. JOHN ROOSA, M.D.

20 EAST 30TH ST., NEW YORK CITY,
February 16, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 12 TO FEBRUARY 18, 1884.

PERIN, GLOVER, *Lieutenant Colonel and Surgeon.*—Medical Director, is granted one month's leave of absence with permission to apply at Division Headquarters, Missouri, for an extension of one month,—*S. O. 16, Department of Dakota,* February 9, 1884.

To be Assistant Surgeons.—With the rank of First Lieutenant to date, December 3, 1883. WILLIAM D. DIETZ, WALTER W. R. FISHER, WILLIAM STEPHENSON, ADRIAN S. PALHEMUS, JOHN L. PHILLIPS, REUBEN L. ROBERTSON, WILLIAM C. BORDEN, EDGAR A. MEARNS, GUY L. EDIE, WILLIAM D. CROSBY, WILLIAM L. KNEEDLER, CHARLES M. GAUDY, CHARLES S. BLACK, JAMES E. PILCHER, ALONZO R. CHAPIN, —*S. O., A. G. O., Washington,* February 11, 1884.

BREWSTER, WILLIAM B., *First Lieutenant and Assistant Surgeon.*—Resignation accepted to date, February 7, 1884.—*S. O., A. G. O., Washington,* February 11, 1884.

WILSON, GEORGE F., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Walla Walla, W. T.—*S. O. 14, Department of the Columbia,* February 5, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*